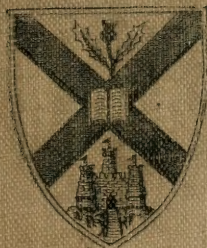


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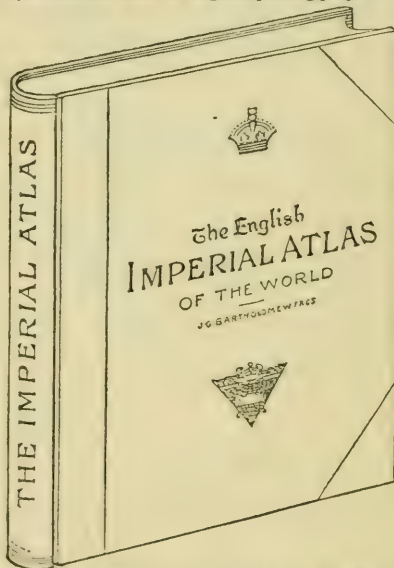
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EDINBURGH, May 1892.

These Courses qualify for Graduation in Medicine and in Science in the UNIVERSITY of EDINBURGH and other UNIVERSITIES; the Royal Colleges of Physicians and Surgeons; the Navy, Army, and Indian Medical Service, and other Medical and Public Boards.

CHEMISTRY.

DR STEVENSON MACADAM, F.R.S.E., &c., conducts Courses of Instruction in Chemistry and its applications to Medicine, Pharmacy, Agriculture and the Industrial Arts, during the Winter, Spring, and Summer Sessions.

SYSTEMATIC LECTURES ON CHEMISTRY. The Lectures commence in October and are delivered daily at 10 A.M. during the Five Months of the Winter Session. These Lectures form a complete course and include Lectures on Technological Chemistry. Tutorial and Class Examinations are held during the Session.

FEE, Five Months' Course, £3, 3s.; For graduation in University of Edinburgh, £4, 4s.

MEDICAL PRACTICAL CHEMISTRY. The Prelections are delivered daily during the Winter, Spring, and Summer Sessions, and the Substances selected for Examination are those with which Medical, Dental, and Pharmaceutical Students are personally called upon to exhibit a practical acquaintance. Hours, 9 A.M. till 5 P.M.

FEE for Three Months, including Apparatus and Re-agents (University, &c.), £3, 3s.

MEDICAL ANALYTICAL CHEMISTRY. The Instructions are conducted daily for the Education of Medical Officers of Health and Pharmaceutical Students in advanced Practical Chemistry, and include the Analyses of Air and other Gases, Waters, Foods, Beverages, and Drugs; the Detection of Poisons in Organic Mixtures; and the Testing of Complex Substances, &c., &c., as required for Degrees in Science including Public Health, and other Examinations. Hours, 9 A.M. till 5 P.M.

FEE, inclusive of Re-agents and Apparatus, £2 per Month or £5 per Session of Three Months.

TECHNICAL ANALYTICAL CHEMISTRY. This Course of Study is arranged for the Instruction of Gentlemen in ordinary Chemical Analyses bearing upon Agriculture, Mining and Manufacturing Industries, and the Prosecution of Researches in Manipulative Chemistry. Hours, 9 A.M. till 5 P.M.

FEE, inclusive of Re-agents and Apparatus, £2 per Month or £5 per Session of Three Months.

CLASS ROOMS, SURGEONS' HALL, NICOLSON STREET.
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CHEMISTRY.

These Classes give all the tuition in Chemistry required for the Examinations conducted by the University of Edinburgh for Degrees in Medicine, Science (Agriculture, &c.); the Highland and Agricultural Society; the Royal Agricultural Society, and other Examining Boards, Triple Qualification, &c.

1. LECTURES ON THEORETICAL CHEMISTRY

commencing Wednesday, 5th October—

Nine a.m., New Veterinary College, Leith Walk, Professor **IVISON MACADAM**, Lecturer.

Class Ticket, £3, 5s. For University Graduation, the Fee is £4, 4s. (including Agricultural Lectures).

2. AGRICULTURAL CHEMISTRY.

Mr **IVISON MACADAM, F.R.S.E., F.C.S., F.I.C., &c.,** will commence his Course of Lectures on Wednesday, 10th January 1893, at Two o'clock p.m. The Class will be continued during January, February, and March. Fee, £2, 2s. (A Class will also be formed in May.)

3. INSTRUCTIONS IN AGRICULTURAL ANALYSES

are conducted Daily in the Laboratories, Surgeons' Hall, from Nine a.m. to Five p.m. Fee £2 per month, £5 for the three months, or £10 for six months (**apparatus and reagents included**).

The Laboratories open on Wednesday, 5th October, and on the first Wednesday of May.

4. PRACTICAL CHEMISTRY

as required for Degrees in Medicine and Science.

5. LABORATORY WORK

as required for the Degrees in Science (Public Health, &c.).

Class Rooms, Surgeons' Hall, Nicolson Street,
AND NEW VETERINARY COLLEGE, LEITH WALK.

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*For Competition by Students in the University
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The Rev. William Ritchie, D.D., Rev. William David Herald, M.A., Rev. John Smith Wilson, M.A., Messrs William Crawford and Charles Watson, of Duns, in the County of Berwick, Trustees of Gray's Prize Essay Fund, hereby offer this year for competition, Three Prizes of £20, £10, £5, respectively, for the First, Second, and Third Essays in the order of Merit, on

"SOCIAL CLASS CONFLICTS—THEIR CAUSES, EVILS, AND REMEDIES."

In accordance with the Terms of the Trust Deed, the Competitors for these Prizes must be Students in the University of Edinburgh in this Winter Session (1891-92), who at the commencement thereof were not of more than three years' standing, from their first Matriculation in a University Curriculum. Each Essay submitted for Competition must have a Motto prefixed to it, and be accompanied with a SEPARATE sealed Envelope, bearing this Motto, and having enclosed the Name and Address of the Author; and these must be forwarded to the Secretary on or before the 1st of September next. The length of each Essay must not exceed what may be read *in an hour*, and the Trustees find it necessary to make this restriction as to time an essential condition in the Competition. The decision will be announced in the Newspapers in the beginning of November, but if it is judged that none of the Essays merit the Prizes offered, the right is reserved of declining to award them, and of offering them for future Competition. The successful Essays will be retained as the Property of the Trustees. The Sealed Envelope must not be put within an Essay, but sent enclosed to the Secretary apart.

DUNS, 10th March 1892.

WILLIAM RITCHIE, D.D., *Secretary*.

ROYAL INFIRMARY, EDINBURGH.

IN this Hospital a portion of the beds is set apart for Clinical Instruction by the Professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the Ordinary Physicians and Surgeons. Special Instruction is given in the Medical Department on the Diseases of Women, of the Skin, Physical Diagnosis, &c., and in the Surgical Department on Diseases of the Eye, the Ear and the Larynx. Separate Wards are devoted to Venereal Diseases, Diseases of Women, Diseases of the Eye; also to cases of Incidental Delirium or Insanity. Post-mortem Examinations are conducted in the Anatomical Theatre by the Pathologists, who also give practical Instruction in Pathological Anatomy and Histology.

MEDICAL DEPARTMENT.

Consulting Physicians, ...	{ Dr GEORGE W. BALFOUR. Prof. Sir DOUGLAS MACLAGAN Dr CLAUD MUIRHEAD.
Consulting Physician for Diseases of Women, ...	Dr ALEXANDER KEILLER.
Professors of Clinical Medicine, ...	{ Dr ALEXANDER R. SIMPSON. Dr T. GRAINGER STEWART. Dr T. R. FRASER. Dr W. S. GREENFIELD.
Ordinary Physicians and Lecturers on Clinical Medicine, ...	{ Dr DAVID J. BRAKENRIDGE. Dr JOHN WYLLIE. Dr J. O. AFFLECK. Dr ANDREW SMART.
Physician and Lecturer on Diseases Peculiar to Women	Dr J. HALLIDAY CROOM.
Physician for Diseases of the Skin, ...	Dr ALLAN JAMIESON. { Dr ALEXANDER JAMES. Dr BYROM BRAMWELL. Dr GEO. A. GIBSON.
Assistant Physicians, ...	{ Dr ALEX. BRUCE. Dr R. W. PHILIP. Dr WM. RUSSELL. Dr J. MURDOCH BROWN.
Assistant Physicians for Diseases of Women, ...	{ Dr D. BERRY HART. Dr A. H. FREELAND BARBOUR.
Medical Registrar, ...	Mr A. LOCKHART GILLESPIE.

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Consulting Surgeons, ...	{ Dr P. H. WATSON. Mr JOSEPH BELL.
Consulting Dental Surgeon, ...	Dr JOHN SMITH.
Professor of Clinical Surgery, ...	Mr ANNANDALE.
Professor of Surgery, ...	Mr CHIENE.
Ordinary Surgeons, ...	{ Mr JOHN DUNCAN. Mr A. G. MILLER. Dr P. H. MACLAREN.
Ophthalmic Surgeons, ...	{ Dr ARGYLL ROBERTSON. Mr GEORGE A. BERRY.
Surgeon to Ear and Throat Department, ...	Dr P. MCBRIDE.
Assistant Surgeons, ...	{ Dr C. W. MACGILLIVRAY. Mr J. M. COTTERILL. Mr CHARLES W. CATHCART. Mr FRANCIS M. CAIRD. Mr HODSDON. Mr J. SHAW M'LAREN.
Dental Department, ...	{ Surgeons to the Edinburgh Dental Hospital and School.
Assistant Ophthalmic Surgeons, ...	{ Dr GEORGE MACKAY. Dr GEO. WM. SYM.
Assistant Surgeon to Ear and Throat Department, ...	Dr R. M'KENZIE JOHNSTON
Pathologists, ...	{ Dr WILLIAM RUSSELL. Mr W. H. BARRETT.
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ROYAL INFIRMARY, EDINBURGH.—Continued.

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3. **CLERKS and DRESSERS** are appointed by the Physicians and Surgeons. These appointments are open to all Students and Junior Practitioners holding Hospital Tickets.
4. **ASSISTANTS** in the **PATHOLOGICAL DEPARTMENT** are appointed by the Pathologists.

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In accordance with the Ordinances of the UNIVERSITY OF EDINBURGH, one half of the qualifying Classes required for GRADUATION may be attended in this School. The Regulations require that the Fee for any Class, taken for GRADUATION in EDINBURGH, shall be the same as that for the corresponding Class in the University.

The whole Education required for GRADUATION at the UNIVERSITY OF LONDON may be taken in this School.

SUMMER SESSION, 1892.

On Monday, 2nd May, the Lectures were commenced.

ANATOMY,	{ PRACTICAL ANATOMY, ...	9 a.m. till 5 p.m. }	Dr J. SYMINGTON (Minto House, Chambers St.).
	{ COURSE OF DEMONSTRATIONS, ...	9 a.m. & 11 a.m. }	
ANATOMY,	{ PRACTICAL ANATOMY, ...	9 a.m. till 5 p.m. }	Mr MACDONALD BROWN (Surgeons' Hall).
	{ COURSE OF DEMONSTRATIONS, ...	9 a.m. and 11 a.m. }	
CHEMISTRY,	{ PRACTICAL CHEMISTRY, ...	9 a.m. till 5 p.m. }	Dr STEVENSON MACADAM (Surgeons' Hall).
	{ ANALYTICAL CHEMISTRY, ...	5 p.m. }	
CHEMISTRY,	{ PRACTICAL CHEMISTRY, ...	9 a.m. till 5 p.m. }	Mr J. FALCONER KING (Minto Ho., Chambers St.).
	{ ANALYTICAL CHEMISTRY, ...	5 p.m. }	
CHEMISTRY,	{ PRACTICAL CHEMISTRY, ...	9 a.m. till 5 p.m. }	Mr IVISON MACADAM (Surgeons' Hall).
	{ ANALYTICAL CHEMISTRY, ...	5 p.m. }	
CHEMISTRY,	{ PRACTICAL CHEMISTRY, ...	9 a.m. till 5 p.m. }	Mr J. RYMER PATERSON (11 Chambers Street).
	{ ANALYTICAL CHEMISTRY, ...	5 p.m. }	
CHEMISTRY,	{ PRACTICAL CHEMISTRY, ...	9 a.m. till 5 p.m. }	Dr A. P. AITKEN (Royal Vet. Col., 8 Clyde Street).
	{ ANALYTICAL CHEMISTRY, ...	5 p.m. }	
CHEMISTRY,	{ PRACTICAL CHEMISTRY, ...	9 a.m. till 5 p.m. }	Dr READMAN (4 Lindsay Place, Geo. IV. Bridge).
	{ ANALYTICAL CHEMISTRY, ...	5 p.m. }	
MATERIA MEDICA AND THERAPEUTICS,		9 a.m. }	
PRACTICAL MATERIA MEDICA including Practical Pharmacy, ...		10 a.m. & 2 p.m., }	Dr WILLIAM CRAIG (Surgeons' Hall).
MATERIA MEDICA AND THERAPEUTICS,		9 a.m. }	Dr RALPH STOCKMAN (Minto House, Chambers Street).
PRACTICAL MATERIA MEDICA including Practical Pharmacy, ...		10 a.m. }	
PRACTICAL PATHOLOGY, { 8, 9, and 10 a.m. }			Dr ALEXANDER BRUCE (Surgeons' Hall).
PRACTICAL PATHOLOGY, ...		9, 10, and 11 a.m., }	Dr WILLIAM RUSSELL (Minto Ho., Chambers St.).
PRACTICAL PHYSIOLOGY, ...		10 a.m. till 4 p.m. }	Mr JAMES HUNTER (Minto House, Chambers' St.).
PRACTICAL PHYSIOLOGY, ...		{ 9 a.m., and other hours. }	Dr NOEL PATON (Surgeons' Hall).
BIOLOGY, ...		11 a.m. }	Mr ARTHUR THOMSON and Mr ROBERT TURNBULL (Surgeons' Hall).
MIDWIFERY AND DISEASES OF WOMEN, ...		10 a.m. }	Dr HALLIDAY CROOM (Minto Ho., Chambers St.).
MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN, ...		2 p.m. }	Dr DAVID BERRY HART (Surgeons' Hall).
MIDWIFERY & DISEASES OF WOMEN & CHILDREN, ...		10 a.m. }	Dr BARBOUR (Park Place).
MEDICAL JURISPRUDENCE AND PUBLIC HEALTH, ...		10 a.m. }	Dr LITTLEJOHN (Surg. Hall).
ROYAL INFIRMARY, ...		12 noon. }	
CLINICAL MEDICINE { (Tues. and Frid.). }		{ Drs BRAKENRIDGE, WYLLIE, AFFLECK, and SMART. Dr HALLIDAY CROOM (For Diseases of Women). (Royal Infirmary). }	
" " "		Tutorial Class for Physical Diagnosis.*	
CLINICAL SURGERY (Mondays and Thursdays), ...		12 noon. }	Mr DUNCAN (Roy. Infirm'y).
CLINICAL SURGERY (Mondays and Thursdays), ...		12 noon. }	Mr A. G. MILLER (Royal Infirmary).
" " "		Tutorial Classes for Practical Surgery.*	

* Under the Superintendence of the Lecturers on Clinical Medicine and Surgery.

School of Medicine—Summer Session—continued.

LARYNGOLOGY AND MEDICAL OTHTHALMOLOGY, and the Uses of Electricity in Medical Treatment and Diagnosis.	9 a.m.	{ Dr JOHN WYLLIE (27 Nicolson Square).
DISEASES OF THE EAR, Tues. and Fri. (with Clinical Instruction at Hospital, 6 Cambridge Street, Lothian Rd., Mon., Thurs., and Sat., 12 noon).	9 a.m.	{ Dr KIRK DUNCANSON (6 Cambridge Street).
DISEASES OF THE EAR AND THROAT, Tues. and Fri. (Clinical Instruction, Royal Infirmary).	11 to 12 a.m.	{ Dr M'BRIE (Royal Infirmary).
PRACTICAL MEDICINE AND PHYSICAL DIAGNOSIS.	9 a.m.	{ Dr JAMES (31 Chambers St.).
PRACTICE OF MEDICINE.	9 a.m.	{ Dr J. O. AFFLECK (Surgeons' Hall).
PRACTICE OF MEDICINE.	9 a.m.	{ Dr BYROM BRAMWELL (Park Pl.).
PRACTICE OF MEDICINE.	9 a.m.	{ Dr G. A. GIBSON (Minto House, Chambers St.).
PRACTICE OF MEDICINE, with Clinical Demonstrations.	9 a.m.	{ Dr R. W. PHILIP (Victoria Disp. 26 Lauriston Place).
BOTANY.	9 a.m.	{ Mr A. N. M'ALPINE (Minto House, Chambers St.).
PRACTICAL BOTANY.	10 a.m.	{ Dr ALLAN JAMIESON (Royal Infirmary).
DISEASES OF THE SKIN, Clinical Instruction on Wednesdays and Saturdays.	10 a.m.	{ Dr STEWART STIRLING (Skin Dispensary, 142 High Street).
DISEASES OF THE SKIN, Tues. and Fri. (with Clinical Instruction at Dispensary, Mon. and Thur. from 1 to 2 p.m.).	4 p.m.	{ Mr GEORGE BERRY (Surgeons' Hall).
DISEASES OF THE EYE, daily (Clinical Instruction at Royal Infirmary and Edinburgh Eye Dispensary).	10 a.m.	{ Dr HUSBAND (Royal Dispensary).
VACCINATION, with special reference to Public Vaccination in England (Wed. and Sat.).	12 noon and 1 p.m.	{ Dr J. B. BUIST (Western Dispensary).
VACCINATION, with special reference to Public Vaccination in England (Thursdays).	3 p.m.	{ Dr J. B. BUIST (Cowgate Dis.).
PRACTICE OF VACCINATION (Mondays).	4 p.m.	{ Mr J. ARTHUR THOMSON (Park Place).
NATURAL HISTORY, { COURSE OF LECTURES, { PRACTICAL CLASS AND LABORATORY WORK, { SERIES OF DEMONSTRATIONS.	12 noon	{ Dr J. BATTY TUKE (Surgeons' Hall).
INSANITY (Tuesdays and Fridays), with practical instruction in Asylum Wards.	2 p.m.	{ Dr C. W. MACGILLIVRAY (Surgeons' Hall).
OPERATIVE SURGERY & SURGICAL ANATOMY.	4 p.m.	{ Mr CHAS. W. CATHCART (27 Nicolson Square).
OPERATIVE SURGERY & SURGICAL ANATOMY.	8 a.m.	{ Mr FRANCIS M. CAIRD (Park Pl.).
OPERATIVE SURGERY & SURGICAL ANATOMY.	8 a.m.	{ Mr HODSDON (Minto Ho., Chambers Street).
CLINICAL MIDWIFERY, at 9.30 a.m. Daily, at Royal Maternity Hospital, during Autumn.		{ Dr HALLIDAY CROOM (Minto Ho., Chambers St.).
PRACTICAL MIDWIFERY AND CLINICAL GYNECOLOGY (Fridays).	1 p.m.	{ Dr PETER YOUNG (Royal Dispensary).
SYSTEMATIC GYNECOLOGY (Tuesdays and Fridays).	10 a.m.	{ Dr BREWIS (27 Nicolson Sq.).
CLINICAL GYNECOLOGY (Mondays and Thursdays).	4.30 p.m.	{ Dr BREWIS (New Town Dis., and 6 Cambridge Street).
DISEASES OF CHILDREN (Clinical Instruction at Hospital on Wednesday and Saturday).	11.45 a.m. or hour to be arranged.	{ Mr JOSEPH BELL and Dr BURN MURDOCH (Sick Children's Hospital).
DISEASES OF INFANCY AND CHILDHOOD. { with Clinical Instruction in Sick Children's Hospital, on Mon. & Th. at 11 a.m.	3 p.m.	{ Dr JOHN THOMSON (31 Chambers St.).
DISEASES OF INFANCY AND CHILDHOOD { (Course of 30 Lectures, including Clinical Demonstrations at the Cowgate Disp.).	3 p.m. daily	{ Dr J. W. BALLANTYNE (Minto Ho., Chambers St.).
DISEASES OF CHILDREN, Mondays and Thursdays (with Clinical Instruction in Sick Children's Hosp. Tue. & Fri., 11 a.m.).	10 a.m.	{ Dr MELVILLE DUNLOP (Oddfellows' Hall, Forrest Road).
MEDICAL ELECTRICITY, including Electro-Physies, Diagnosis, and Therapeutics, commencing 5th May.	3 p.m.	{ Dr DAWSON TURNER (Surgeons' Hall).
DEASES OF THE CHEST, Clinical Course, (Mondays and Fridays).	4 to 5.30 p.m.	{ Dr R. W. PHILIP (Victoria Disp., 26 Lauriston Place).
DISEASES OF THE TROPICS AND CLIMATOLOGY (Mondays, Wednesdays, and Fridays).	5 p.m.	{ Dr R. W. FELKIN (Park Place).

School of Medicine—Summer Session—continued.

CLASSES FOR WOMEN.	PRACTICAL ANATOMY, . . .	{ 9 a.m. till 5 p.m. }	Dr ALFRED W. HUGHES (Surgeon Square).
	PRACTICAL ANATOMY, . . .	{ 9 a.m. till 5 p.m. }	Mr DUNCAN LONGDEN (30 Chambers Street).
	PRACTICAL CHEMISTRY, . . .	2 p.m.	{ Mr IVISON MACADAM (30 Chambers Street).
	PRACTICAL CHEMISTRY, . . .		Dr A. P. AITKEN (Surgeon Sq.).
	MATERIA MEDICA, . . .	3 p.m.	Dr WM. CRAIG (30 Chambers St.).
	PRACTICAL MATERIA MEDICA, includ- ing Practical Pharmacy, . . .	{ 3 p.m. }	{ Dr W. CRAIG (30 Chambers Street).
	OPERATIVE SURGERY AND SURGICAL ANATOMY, . . .		{ Dr ALFRED W. HUGHES (Surgeon Square).
	MATERIA MEDICA, . . .		Dr RALPH STOCKMAN (Surgeon Sq.).
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	MIDWIFERY AND DISEASES OF WOMEN, . . .		{ Dr J. W. BALLANTYNE (30 Chambers Street).
	MEDICAL JURISPRUDENCE AND PUBLIC HEALTH, . . .		{ Dr LITTLEJOHN (Surgeon Square).
	LEITH HOSPITAL, . . .	3 to 5 p.m.	Dr FINLAY (Leith Hospital).
	PRACTICAL PHYSIOLOGY, . . .		Mr JAMES HUNTER (30 Chambers St.).
	PRACTICAL PHYSIOLOGY, . . .	12 noon.	Dr NOËL PATON (Surg. Hall.).
	PRACTICAL PATHOLOGY, . . .		Dr WILLIAM RUSSELL (30 Chambers St.).
	NATURAL HISTORY, Lectures, Practical Class, and Demonstrations. . .		{ Mr J. ARTHUR THOMSON (Park Place).
	DISEASES OF CHILDREN, . . .		Dr JOHN THOMSON (50 Chambers St.).
	BOTANY, . . .	{ 9 a.m. }	{ Mr ROBERT TURNBULL (30 Chambers Street).
	PRACTICAL BOTANY, . . .	{ 10 a.m. }	{ Mr GEORGE A. BERRY (Surgeon Square).
	OPHTHALMOLOGY, . . .		Mr GEORGE A. BERRY (30 Chambers St.).
	OPHTHALMOLOGY, . . .		Mr GEORGE A. BERRY (30 Chambers St.).
	INSANITY, . . .		Dr J. BATTY TUKE (30 Chambers St.).
	DISEASES OF CHILDREN, Clinical Instruction and Lectures, . . .	{ At hours to } { be arranged. }	{ Mr JOSEPH BELL and Dr BURN MURDOCH (Sick Child. Hosp.)

Summer Session 1893.

WINTER SESSION, 1892-93.

On Monday, 3rd October, the PRACTICAL ANATOMY ROOMS and CHEMICAL LABORATORIES will be opened. On Tuesday, 11th October, the Lectures will be commenced.

ANATOMY,	{ PRACTICAL ANATOMY, . . .	9 a.m. till 5 p.m. }	Dr J. SYMINGTON (Minto House, Chambers St.).
	{ COURSE OF LECTURES, . . .	1 p.m. }	
	{ COURSE OF DEMONSTRATIONS, . . .	4 p.m. }	
ANATOMY,	{ PRACTICAL ANATOMY, . . .	9 a.m. till 5 p.m. }	Mr MACDONALD BROWN (Surgeons' Hall).
	{ COURSE OF LECTURES, . . .	9 a.m. }	
	{ COURSE OF DEMONSTRATIONS, . . .	4 p.m. }	
CHEMISTRY,	{ LECTURES, . . .	10 a.m. }	Dr STEVENSON MACADAM (Surgeons' Hall).
	{ PRACTICAL CHEMISTRY, . . .	9 a.m. till 5 p.m. }	
	{ ANALYTICAL CHEMISTRY, . . .	5 p.m. }	
CHEMISTRY,	{ LECTURES, . . .	10 a.m. }	Mr J. FALCONER KING (Minto Ho., Chambers St.).
	{ PRACTICAL CHEMISTRY, . . .	9 a.m. till 5 p.m. }	
	{ ANALYTICAL CHEMISTRY, . . .	5 p.m. }	
CHEMISTRY,	{ LECTURES, . . .	9 a.m. }	Mr IVISON MACADAM (New Veterinary College, Leith Wk. and Surgeons' Hall).
	{ PRACTICAL CHEMISTRY, . . .	9 a.m. till 5 p.m. }	
	{ ANALYTICAL CHEMISTRY, . . .	5 p.m. }	
CHEMISTRY,	{ LECTURES, . . .	10 a.m. }	Mr J. RYMER PATERSON (11 Chambers Street).
	{ PRACTICAL CHEMISTRY, . . .	9 a.m. till 5 p.m. }	
	{ ANALYTICAL CHEMISTRY, . . .	5 p.m. }	
CHEMISTRY,	{ LECTURES, . . .	10 a.m. }	Dr A. P. AITKEN (Royal Veterinary College, 8 Clyde Street).
	{ PRACTICAL CHEMISTRY, . . .	9 a.m. till 5 p.m. }	
	{ ANALYTICAL CHEMISTRY, . . .	5 p.m. }	
CHEMISTRY,	{ PRACTICAL CHEMISTRY, . . .	9 a.m. till 5 p.m. }	Dr READMAN (4 Lindsay Pl., George IV. Bridge).
	{ ANALYTICAL CHEMISTRY, . . .	5 p.m. }	
PRACTICE OF PHYSIC, . . .	9 a.m.	Dr JOHN WYLLIE (27 Nicolson Square).	
PRACTICE OF PHYSIC, . . .	9 a.m.	Dr JAMES (31 Chambers Street).	
PRACTICE OF PHYSIC, . . .	9 a.m.	Dr J. O. AFFLECK (Surgeons' Hall).	
PRACTICE OF PHYSIC, . . .	9 a.m.	Dr BYROM BRAMWELL (Park Place).	
PRACTICE OF PHYSIC, . . .	9 a.m.	Dr G. A. GIBSON (Minto Ho., Chambers St.).	
PRACTICE OF PHYSIC, with Clinical Demonstrations, . . .	9 a.m.	Dr R. W. PHILIP (New North Hall).	

School of Medicine—Winter Session—continued.

SURGERY, ...	10 a.m.	{ Dr C. W. MACGILLIVRAY (Surgeons' Hall).
SURGERY, ...	10 a.m.	{ Mr CHARLES W. CATHCART (27 Nicolson Square).
SURGERY, ...	10 a.m.	{ Mr FRANCIS M. CAIRD (Park Pl.).
SURGERY, ...	10 a.m.	{ Mr HODSDON (Minto Ho., Chambers Street).
MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN, ...	11 a.m.	Dr MILNE MURRAY (Park Place).
MIDWIFERY AND DISEASES OF WOMEN, ...	11 a.m.	Dr MATHESON (Marshall Street).
INSTITUTES OF MEDICINE, ...	11 a.m.	{ Mr JAMES HUNTER (Minto House Chambers Street).
PRACTICAL PHYSIOLOGY, ...	10 a.m. or other hours,	{ Dr NOËL PATON (Surgeons' Hall).
INSTITUTES OF MEDICINE, ...	11 a.m.	
PRACTICAL PHYSIOLOGY, ...	at suitable hours.	
ROYAL INFIRMARY, ...	12 noon.	
CLINICAL MEDICINE (Tues. and Fri.), ...	12 noon.	{ Drs BRAKENRIDGE, WYLLIE, AFFLECK, and SMART. Dr HALLIDAY CROOM. (<i>For Diseases of Women</i>). (Royal Infirmary).
— Tutorial Class for Physical Diagnosis,*		
CLINICAL SURGERY (Mon. and Thur.), ...	12 noon.	Mr DUNCAN (Royal Infirmary).
CLINICAL SURGERY (Mon. and Thur.), ...	12 noon.	Mr A. G. MILLER (Roy. Infirmary).
— Tutorial Classes for Practical Surgery.*		
MEDICAL JURISPRUDENCE & PUBLIC HEALTH, 2 p.m.		Dr LITTLEJOHN (Surgeons' Hall).
MATERIA MEDICA AND THERAPEUTICS, ...	2 p.m.	{ Dr WILLIAM CRAIG (Surgeons' Hall).
PRACTICAL MATERIA MEDICA, including Practical Pharmacy, ...	9 a.m. and 3 p.m.	
MATERIA MEDICA AND THERAPEUTICS, ...	2 p.m.	{ Dr RALPH STOCKMAN (Minto Ho., Chambers Street).
GENERAL PATHOLOGY, ...	3 p.m.	Dr ALEX. BRUCE (Surgeons' Hall).
GENERAL PATHOLOGY AND MORBID ANATOMY, ...	3 p.m.	{ Dr WM. RUSSELL (Minto House, Chambers Street).
PRACTICAL PATHOLOGY, ...	9 a.m.	
DISEASES OF THE EAR, Tuesdays and Frids. (with Clinical Instruction at Hospital, 6 Cambridge St., Lothian Rd., Mon., Thurs., and Sat., 12 noon), commencing 11 Nov., ...	9 a.m.	{ Dr KIRK DUNCANSON (6 Cambridge Street).
DISEASES OF THE EAR AND THROAT, including Laryngoscopic and Rhinoscopic Diagnosis and Treatment—30 Lectures, daily, and Clinical Instruction at Royal Infirmary, beginning 11th Nov., ...	4 p.m.	{ Dr P. M'BRIDE (Surgeons' Hall).
BOTANY, ...	9 a.m.	{ Mr A. N. M'ALPINE (Minto Ho. Chambers Street).
PRACTICAL BOTANY, ...	10 a.m.	
DISEASES OF THE SKIN, Clinical Instruction on Weds. and Sats., ...	10 a.m.	{ Dr ALLAN JAMIESON (Royal Infirmary).
DISEASES OF CHILDREN, Clinical Instruction and Lectures on Wed. and Sat 3 Months' Course, com. Nov.	11.45 a.m. or hour to be arranged.	{ Mr JOSEPH BELL and Dr BURN MURDOCH (Sick Children's Hos.).
DISEASES OF INFANCY AND CHILDHOOD, ...	11 a.m. & 3 p.m.	{ Dr JOHN THOMSON (31 Chambers St. and New Town Dispensary).
DISEASES OF INFANCY AND CHILDHOOD (Course of 50 Lectures, including Clinical Demonstrations at Cowgate Disp.), ...	3 p.m. daily.	{ Dr J. W. BALLANTYNE (Minto Ho., Chambers Street).
DISEASES OF CHILDREN, Clinical Course	3 p.m.	{ Dr MELVILLE DUNLOP (Oddfellows. Hall, Forrest Rd. & Child. Hosp.)
VACCINATION, with special reference to Public Vaccination in England (Wednesdays and Saturdays), ...	12 noon and 1 p.m.	Dr HUSBAND (Royal Dispensary).
VACCINATION, with special reference to Public Vaccination in England (Thursdays), ...	3 p.m.	Dr J. B. BUIST (West. Dispensary).
PRACTICE OF VACCINATION, Mondays, ...	4 p.m.	Dr J. B. BUIST (Cowgate Dispensary).
NATURAL HISTORY, ...	12 noon	
(COURSE OF LECTURES, PRACTICAL CLASS AND LABORATORY WORK, ...)		{ Mr J. ARTHUR THOMSON (Park Place).
SERIES OF DEMONSTRATIONS, ...		

* Under the superintendence of the Lecturers.

School of Medicine—Winter Session—continued.

DISEASES OF THE EYE, 30 Lectures, beginning in November,		{ Mr GEORGE BERRY (Edinburgh Eye Dispensary).
DISEASES OF THE CHEST, Clinical Course (Mondays and Fridays),	4 to 5.30 p.m.	{ Dr R. W. PHILIP (Consumption Dispensary, 13 Bank Street).
SYSTEMATIC GYNÆCOLOGY, ...	5 p.m.	{ Dr HALLIDAY CROOM (Minto Ho., Chambers Street).
PRACTICAL MIDWIFERY AND CLINICAL GYNÆCOLOGY (Fridays), ...	1 p.m.	{ Dr PETER YOUNG (Royal Dispensary).
CLINICAL MIDWIFERY (daily at suitable hours, February to May), ...		{ Dr BERRY HART (Royal Maternity Hospital).
CLINICAL GYNÆCOLOGY, Mondays and Thursdays, ...	4.30 p.m.	{ Dr BREWIS (New Town Dispensary and 6 Cambridge Street).
DISEASES OF THE TROPICS AND CLIMATOLOGY (Mon., Wed., and Fri.), ...	5 p.m.	{ Dr R. W. FELKIN (Park Place).
PRACTICAL ANATOMY, LECTURES AND DEMONSTRATIONS, ...	9 a.m. to 5 p.m.	{ Dr ALFRED W. HUGHES (Surgeon Square).
PRACTICAL ANATOMY, LECTURES AND DEMONSTRATIONS, ...	9 a.m.	{ Mr DUNCAN LONGDEN (30 Chambers Street).
CHEMISTRY—LECTURES, ...	11 a.m.	{ Mr IVISON MACADAM (30 Chambers Street).
CHEMISTRY—LECTURES, ...	11 a.m.	{ Dr A. P. AITKEN (Surgeon Square).
PRACTICE OF PHYSIC, ...		{ Dr JAMES (Surgeon Square).
PRACTICE OF PHYSIC, ...		{ Dr R. W. PHILIP (30 Chambers Street).
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CLASSES FOR WOMEN. INSTITUTES OF MEDICINE, ...		{ Mr JAMES HUNTER (30 Chambers Street).
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INSTITUTES OF MEDICINE, ...		{ Dr ALEX. BRUCE (Surgeons' Hall).
PRACTICAL PHYSIOLOGY, ...	11 a.m.	{ Dr W. FINLAY (Leith Hospital).
CLINICAL SURGERY, (Mon. and Thurs.), ...	3 p.m.	{ Mr JOSEPH BELL and Dr BURN MURDOCH (Sick Childrens' Hospital).
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Physiography.

Geology.

Botany.

Biology.

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Hygiene.

Agriculture.

Horticulture.

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Mechanical Engineering.

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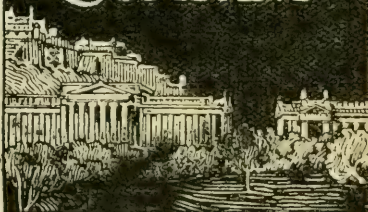
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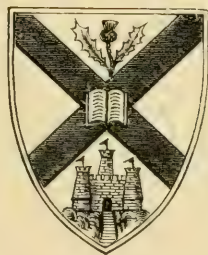
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1892-93.



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University Calendar

1892-93



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P R E F A C E.

THE EDINBURGH UNIVERSITY CALENDAR, published annually in May by authority of the *Senatus Academicus*, contains *Synopses of the Courses of Lectures delivered by the Professors and Lecturers; the Class Prize Lists; the Regulations and Subjects of Examination for Degrees in Arts, Divinity, Law, Medicine, and Science; the Questions proposed to Candidates for Degrees, &c.; the Annual Graduation Lists; the Bursaries, Scholarships, Fellowships, and other Endowments of the University; Benefactions¹ to the University; the Regulations for the Schoolmaster's Diploma and for the Certificate of Literate in Arts; the Regulations for University Certificates in Arts for Women; and a statement of the Annual Income and Expenditure of the University.*

¹ A full list of the chief Benefactors, with the purposes of their benefactions, is given at pages 543-554.

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UNIVERSITY OF EDINBURGH,
25th May 1892.

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The Calendar.

1892—MAY, 31 DAYS.

1	S	{ SUMMER SESSION OPENS. <i>Clin. Surgery</i> <i>Exams. begin.</i> <i>Clinical Medicine Exams. begin.</i>
2	M	
3	Tu	
4	W	
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	
10	Tu	
11	W	
12	Th	LAW CLASSES OPEN. Court of Session sits.
13	Fr	
14	Sa	
15	S	
16	M	{ Whitsunday Term. <i>Meeting of University Court at</i> <i>4 P.M.</i>
17	Tu	
18	W	<i>Fellowships, Scholarships, Bursaries, paid by Factor.</i>
19	Th	HOLIDAY. General Assembly meets.
20	Fr	
21	Sa	
22	S	
23	M	
24	Tu	Queen Victoria born, 1819.
25	W	
26	Th	
27	Fr	<i>Meeting of Senatus Academicus at 3 P.M.</i>
28	Sa	
29	S	
30	M	
31	Tu	

1892—JUNE, 30 DAYS.

1	W	
2	Th	
3	Fr	
4	Sa	
5	S	
6	M	
7	Tu	<i>University Local Examinations begin.</i>
8	W	
9	Th	
10	Fr	
11	Sa	
12	S	
13	M	<i>{ Meeting of University Court at 4 P.M. Final Prof. Exam. in Med.—Prac. of Phys., 10; Med. Jur., 1. Final Prof. Exam. in Med.—Surg. 10; Midwif. 1; Prescriptions, 3.30. Final Prof. Oral Exams. begin.</i>
14	Tu	
15	W	
16	Th	
17	Fr	
18	Sa	
19	S	
20	M	<i>Accession of the Queen, 1837.</i>
21	Tu	
22	W	
23	Th	<i>{ Midsummer Day. Meeting of Senatus Academicus at 3 P.M. Names for Second B.Sc. in Public Health to be given in, Certificates shown, and Fees paid.</i>
24	Fr	
25	Sa	
26	S	
27	M	<i>{ Candidates for Law Graduation Examinations to intimate their names, show Certificates, and pay Fees. Queen's Coronation, 1838.</i>
28	Tu	
29	W	
30	Th	

1892—JULY, 31 DAYS.

1	Fr	
2	Sa	
3	S	{ Exam. for Deg. in Law: Scots Law, 10; Const. Law and Hist., 3. Second B.Sc. in Public Health: Medicine, 10; Sanitary Law and Vital Statistics, 1.
4	M	
5	Tu	{ Exam. for Deg. in Law: Civil Law, 10; Const. Law and Hist., 3. Second B.Sc.: Practical Sanitation, 10 and 1.
6	W	{ Exam. for Deg. in Law: Conveyancing, 10; Political Economy, 10; Medical Jurisprudence, 3. Second B.Sc. Public Health, Oral Examination.
7	Th	{ Exam. for Deg. in Law: Public Law, 10. Second B.Sc. Public Health, Oral Examination.
8	Fr	
9	Sa	
10	S	{ Names of Candidates for 2d Professional Exam. to be given in, Certificates shown, and Fees paid.
11	M	
12	Tu	
13	W	
14	Th	
15	Fr	<i>Last day for payment of Stamp Duty for M.D. Diplomas.</i> <i>Last day for Names of Candidates for First Prof. Exam. in Med. and for Exams. in Science, to be given in, Certificates shown, and Fees paid. Names and Subjects for M.A. with Honours in Nat. Science to be intimated.</i>
16	Sa	
17	S	
18	M	<i>Meeting of University Court at 4 P.M.</i> <i>Second Prof. Exam. in Med.—Anat., 10; Physiol., 1.</i>
19	Tu	{ <i>Do. do. Materia Medica, 10; Pathol., 1.</i>
20	W	
21	Th	<i>Second Prof. Oral Exams. begin.</i>
22	Fr	SUMMER SESSION ENDS.
23	Sa	<i>Prac. Chem. Exam., for First Prof. and First B.Sc. begins.</i>
24	S	{ <i>First Prof. in Med., First and Second B.Sc., and M.A. with Hon. in Nat. Sc. Exams.: Chem., 10; Physiol., 10; Laboratory Work, 10; Bot., 1; Physics (Sc.), 1.</i>
25	M	
26	Tu	{ <i>First Prof. in Med., First and Second B.Sc., and M.A. with Hon. in Nat. Sc. Exams.: Nat. Hist., 10; Physics (1st Prof.), 1; Geology, 1. First Prof., &c., Oral Exams. begin. Practical Laboratory Work for Pub. Health begins.</i>
27	W	
28	Th	{ <i>Meeting of Senatus Academicus at 3 P.M. (1) Candidates for Degrees to be reported and approved; (2) Class Lists and Returns for Court, &c., to be given in.</i>
29	Fr	
30	Sa	
31	S	

1892—AUGUST, 31 DAYS.

1	M	{ GRADUATION CEREMONIAL IN LAW. MEDICINE AND SCIENCE AT 10 A.M. Lammas Day.
2	Tu	
3	W	{ <i>University Library open from 10 A.M to 1 P.M. till Thursday, 1st September. Closed on Saturdays.</i>
4	Th	
5	Fr	
6	Sa	
7	S	
8	M	
9	Tu	
10	W	
11	Th	
12	Fr	
13	Sa	
14	S	
15	M	
16	Tu	
17	W	
18	Th	
19	Fr	
20	Sa	
21	S	
22	M	
23	Tu	
24	W	
25	Th	
26	Fr	
27	Sa	
28	S	
29	M	
30	Tu	
31	W	

1892—SEPTEMBER, 30 DAYS.

1	Th	{	<i>Names of Candidates for Ferguson Scholarships to be given in. Reading Room in University New Buildings open from 10 to 1 till 1st October.</i>
2	Fr		
3	Sa		
4	S		
5	M		
6	Tu		
7	W		
8	Th		
9	Fr		
10	Sa		
11	S		
12	M		
13	Tu		
14	W		
15	Th		
16	Fr		
17	Sa		
18	S		
19	M		Edinburgh Holiday.
20	Tu		
21	W		
22	Th		
23	Fr		
24	Sa		
25	S		
26	M	{	<i>Last day for Names for Preliminary Examinations in Medicine and Science to be given in, and Fees paid.</i>
27	Tu		
28	W		<i>Exams. for Ferguson Scholarships begin.</i>
29	Th		
30	Fr		

1892—OCTOBER, 31 DAYS.

1	Sa	{	ANNUS ACADEMICUS begins. First day for payment of MATRICULATION fee. Last day for entering for Preferential Bursaries.
2	S		
3	M	{	Annual Inspection of Library. Closed till 10th October. All Books to be returned before this date. Practical Anatomy and Public Health Laboratory Courses begin. Last day for Names of Candidates for Degrees in Arts and Science, for B.L. Preliminary, for Schoolmaster's Diploma, and for L.A. Certificates to be given in, Certificates shown, and Fees paid.
4	Tu		
5	W	{	Prelim. Exam. in Arts for Med. and Sc. Degrees : Arith., 9 A.M. ; Math., 11.30 ; Higher Math., 2. Prelim. Do. : Eng., 9 ; Nat. Phil., 11.30 ; Mech. 2.
6	Th		
7	Fr	{	Prelim. Do. : Lat., 9 ; Logic, 11.30 ; Mor. Phil., 2. Do. Do. : Greek, 9 ; French, 11.30 ; German, 2 ; B.Sc. in Agriculture, Engineering, 10.
8	Sa		
9	S	{	Last day for entering for open Bursaries in Arts.
10	M		
11	Tu	{	CLASSES IN FACULTY OF MEDICINE OPEN. Pass Examinations for M.A. and for First B.Sc. : Latin, 9 and 11.30 ; Mathematics, 2.30.
12	W		
13	Th	{	Pass Examinations for M.A. and for First B.Sc. : Mathematics, 9 ; Greek, 11.30 and 2.30. Prelim. French and German for B.L., 11.30 and 2.30. Meeting of Preliminary Examiners.
14	Fr		
		{	Pass Examinations for M.A. and for First and Second B.Sc. : Logic and Psychology, 9 ; Natural Philosophy, 1 ; Physics, 1 ; Chemistry as applied to Agriculture, 9 ; Veterinary Hygiene, 1.
		{	Pass Examinations for M.A. and First and Second B.Sc. : Moral Philosophy, 9 ; Rhetoric, 1 ; Agriculture, 9 ; Economics, 1. Examinations for Heriot Bursaries : French, 9 ; German, 1 ; Gaelic for Macpherson Bursary, 1.

1892—OCTOBER—continued.

15	Sa	{	ENTRANCE EXAMINATIONS for CURRICULUM of THREE SESSIONS, and for OPEN BURSARIES IN ARTS, <i>Latin</i> , 9; <i>Greek</i> , 1. CLASSES IN FACULTY OF LAW OPEN. <i>Last day for entering Names for Second and Third Year Grierson Bursaries in Law.</i>
16	S		
17	M	{	Meeting of University Court at 4 P.M. Entrance Examination in Mathematics and Exam. for open Bursaries, second day. <i>Mathematics</i> , 9; <i>English</i> , 1; <i>Logic</i> , &c., 1.
18	Tu		Exam. in Mathematics for Heriot Bursaries, 9; <i>Gaelic</i> for Mackinnon Bursaries at 9 A.M.
19	W	{	CLASSES IN FACULTY OF ARTS OPEN. <i>Last day for Names of Candidates for B.D. to be given in, Certificates shown, and Fees paid.</i>
20	Th		
21	Fr	{	Names of Candidates for 2nd B.Sc. in Engineering to be given in, Certificates shown, and Fees paid.
22	Sa		Meeting of Senatus Academicus at 2 P.M.: (1) <i>Standing Committees to be appointed</i> ; (2) <i>Names of Professors' Assistants to be submitted for approval</i> ; (3) <i>Annual Budget of Senatus to be arranged</i> ; (4) <i>House Committee to submit Estimates for year. Examination of Preferential Candidates for Bursaries in Arts: Latin at 9 A.M.; Greek at 10.30; Mathematics at 1 P.M.; English at 2.30.</i>
23	S	{	
24	M		<i>Last day for Names of Candidates for Degrees in Law to be given in, Certificates shown, and Fees paid.</i>
25	Tu	{	Examination for B.D.: <i>Hebrew</i> , 10; <i>Apol. Theol.</i> , 2.
26	W		Examination for B.D.: <i>Eccles. Hist.</i> , 10; <i>Syst. Theol.</i> , 2.
27	Th	{	Exam. for B.D.: <i>Bib. Crit.</i> , 10.
28	Fr		Meeting of General Council, at 3 o'clock.
29	Sa	{	
30	S		
31	M	{	Exam. for Degrees in Law: <i>Scots Law</i> , 10; <i>Const. Law and History</i> , 3.

1892—NOVEMBER, 30 DAYS.

1	Tu	{	DIVINITY CLASSES OPEN. <i>Introductory Address by Rev. Prof. Taylor, D.D., 12. Exam. for Deg. in Law: Civil Law, 10; Const. Law and Hist., 3. Dynamics for Second B.Sc. in Engineering, 1. Exam. for Deg. in Law: Conveyancing, 10; Pol. Econ., 10; Med. Jurisp., 3. Second B.Sc.: Engineering and Drawing, 11 and 2. Exam. for Deg. in Law: Public Law, 10. Second B.Sc.: Engineering and Drawing, 11 and 2. Do. do do, 10 and 2.</i>
2	W		
3	Th		
4	Fr		
5	Sa		
6	S		
7	M		
8	Tu		
9	W		
10	Th		
11	Fr	{	Martinmas Term. <i>Certificates for Bursaries in Arts granted by Dean. Examinations for Divinity Bursaries: 1st day, 10. Examinations for Divinity Bursaries: 2d day, 10.</i>
12	Sa		
13	S	{	<i>Meeting of University Court at 4 P.M. Appointment of Class Assistants to be submitted for approval. Fellowships, Scholarships, Bursaries paid by Factor.</i>
14	M		
15	Tu		
16	W		
17	Th		
18	Fr		
19	Sa		
20	S		
21	M		
22	Tu		
23	W	{	<i>Meeting of Senatus Academicus at 2 P.M.: Reports on Bursaries and Entrance Exams.</i>
24	Th		
25	Fr	{	<i>Registration of Members of General Council for Register of 1893 ends.</i>
26	Sa		
27	S		
28	M		
29	Tu		
30	W		

1892—DECEMBER, 31 DAYS.

1	Th	{	<i>Names of Candidates for Fellowships and Scholarships to be intimated.</i>
2	Fr		
3	Sa		
4	S		
5	M		
6	Tu		
7	W		
8	Th		
9	Fr		
10	Sa		
11	S		
12	M		<i>Meeting of University Court at 4 P.M.</i>
13	Tu		
14	W		
15	Th		
16	Fr		
17	Sa	{	<i>Meeting of Senatus at 2 P.M.: (1) Election of Managers for Royal Infirmary; (2) Report to Widows' Fund.</i>
18	S		
19	M	{	<i>Univ. Library open from 10 A.M. to 1 P.M. till Wednesday, 4th Jan. Closed on Saturdays. Reading Room in New Buildings closed during same period.</i>
20	Tu		
21	W		<i>Classes meet for last time before Christmas Vacation.</i>
22	Th	{	<i>Examinations for Fellowships and Scholarships in Arts begin at 10 o'clock.</i>
23	Fr		
24	Sa		
25	S		CHRISTMAS DAY.
26	M		
27	Tu		
28	W		
29	Th		
30	Fr		
31	Sa		

1893—JANUARY, 31 DAYS.

1	S	
2	M	
3	Tu	
4	W	<i>Classes meet after Christmas Vacation.</i>
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	
10	Tu	
11	W	
12	Th	
13	Fr	
14	Sa	
15	S	
16	M	{ <i>Meeting of University Court at 4 P.M. Appointment of Examiners in Medicine and in Science.</i>
17	Tu	
18	W	
19	Th	
20	Fr	
21	Sa	
22	S	
23	M	{ <i>Meeting of University Court for hearing Registration Appeals, at 4 P.M.</i>
24	Tu	
25	W	
26	Th	
27	Fr	
28	Sa	{ <i>Meeting of Senatus Academicus at 2 P.M.: (1) Annual Reports on Museums and Univ. Library to be given in; (2) Names for Honorary Degrees proposed; (3) Arrangements for Summer and Winter Sessions, 1893-94.</i>
29	S	
30	M	
31	Tu	

1893—FEBRUARY, 28 DAYS.

1 W
 2 Th
 3 Fr
 4 Sa
 5 S
 6 M
 7 Tu
 8 W
 9 Th
 10 Fr
 11 Sa
 12 S
 13 M
 14 Tu
 15 W
 16 Th
 17 Fr
 18 Sa
 19 S
 20 M
 21 Tu
 22 W
 23 Th
 24 Fr
 25 Sa
 26 S
 27 M
 28 Tu

{ *Meeting of University Court at 4 P.M. Reid Com-*
memoration Concert. Holiday in Faculty of Arts.

{ *Last day for Names for Prelim. Exams. in Med.*
and in Science to be given in, and Fees paid.

{ *Meeting of Senatus Academicus at 2 P.M.: (1) Report*
on Honorary Degrees in Divinity and Law; (2)
Resolution to Elect Member of General Assembly.

1893—MARCH, 31 DAYS.

1	W	
2	Th	
3	Fr	
4	Sa	
5	S	
6	M	{ <i>Prelim. Exam. in Arts for Degrees in Med. and Science: Arith., 9; Math., 11.30; Higher Math., 2.</i>
7	Tu	
8	W	{ <i>Do. English, 9 o'clock; Nat. Phil., 11.30; Mechanics, 2.</i>
9	Th	
10	Fr	{ <i>Do. Latin, 9 o'clock; Logic, 11.30; Moral Philosophy, 2.</i>
11	Sa	
12	S	{ <i>Do. Greek, 9 o'clock; French, 11.30; German, 2.</i>
13	M	
14	Tu	{ <i>Meeting of University Court at 4. P.M. Last day for Names for First Prof. Exam., and for Exams. for Degrees in Science to be given in, Certificates shown, and Fees paid. Names of Candidates and subjects of Exam. for M.A. with Honours in Natural Science to be intimated.</i>
15	W	
16	Th	{ <i>Names for B.D. Exams. to be given in, Certificates shown, and Fees paid.</i>
17	Fr	
18	Sa	{ CLASSES IN FACULTIES OF DIVINITY, LAW, AND MEDICINE CLOSE. <i>Last day for Names of Candidates for Degrees in Arts, for Schoolmaster's Diploma, for Literate in Arts, and for B.L. Preliminary to be given in, and Fees paid. Meeting of Preliminary Examiners.</i>
		{ <i>Prac. Chem. Exams. for Med. and Sc. begin. Names of Candidates for Second Prof. Exam. to be given in, Certificates shown, and Fees paid.</i>

1893—MARCH—continued.

19	S	
20	M	{ <i>First Prof. in Med., First and Second B.Sc. and M.A. Honours in Nat. Sc. Exams.: Chemistry, 10; Physiol., 10; Bot., 1. First B.Sc. in Public Health begins. Laboratory Work, 10; Physics, 1.</i>
21	Tu	{ <i>First Prof., First and Second B.Sc. and M.A. with Honours in Nat. Sc. Exams.: Nat. Hist., 10; Physics (1st Prof.), 1; Geology, 1. Oral Exams. begin. Practical Laboratory Work for Public Health begins.</i>
22	W	{ <i>Exam. for D.Sc. in Semitic Philology begins. B.D. Exams.: Heb., 10; Apol. Theol., 2.</i>
23	Th	<i>B.D. Exams.: Eccles. Hist., 10; Syst. Theol., 2.</i>
24	Fr	<i>B.D. Exam.: Bib. Crit., 10.</i>
25	Sa	{ <i>Meeting of Senatus Academicus at 2 P.M.: (1) Member of Assembly to be elected; (2) Acceptances of Honorary Degrees; (3) Class Lists and Returns for Court to be given in. Exams. for Schoolmaster's Diploma, 10 and 2; Education for L.A., 10.</i>
26	S	
27	M	{ <i>Second Prof. Exams.: Anat. 10; Physiol., 1; First and Second B.Sc. in Agriculture: Agriculture, 9; Economics, 1; Engineering, 1.</i>
28	Tu	{ <i>Second Prof. and First and Second B.Sc. in Agriculture Exams.: Mater. Medica, 10; Pathology, 1; Second Professional Oral Exams. begin; Agricultural Chemistry, 10; Veterinary Hygiene, 1.</i>
29	W	
30	Th	CLASSES IN THE FACULTY OF ARTS CLOSE.
31	Fr	GOOD FRIDAY.

1893—APRIL, 30 DAYS.

1	Sa	{ <i>Certificates, &c., for M.A. Exams. to be shown before one p.m.</i>
2	S	EASTER SUNDAY.
3	M	{ <i>Pass Examinations for M.A. and for First and Second B.Sc.: Latin, 9 and 11.30; Mathematics, 3; Engineering and Drawing, 11 and 2.</i>
4	Tu	{ <i>Pass Examinations for M.A. and for First and Second B.Sc.: Math., 9; Greek, 11.30 and 2.30. Preliminary French and German for B.L., 11.30 and 2.30. Engineering and Drawing, 11 and 2.</i>
5	W	{ <i>Pass Examinations for M.A. and for First and Second B.Sc.: Logic and Psychology, 9; Nat. Philosophy, 1; Engineering and Drawing, 10 and 2.</i>
6	Th	<i>Pass Exams. for M.A.: Moral Phil., 9; Rhetoric, 1.</i>
7	Fr	{ <i>Examinations for M.A. with Honours and for Second B.Sc.: Latin, 9 and 1; Logic, 9 and 1; Mathematics, 9 and 1. Also Exam. for D.Sc. in Mental Science and Philology, 9.</i>
8	Sa	{ <i>Do. do. do.—Latin, 9; Greek, 1; Logic and Metaph., 9; Mor. Phil., 1; Nat. Phil., 9 and 1; Exp. Physics, 1; Dynamics (B.Sc. Engin.), 1.</i>
9	S	
10	M	{ <i>Examination for M.A. with Honours: Greek, 9 and 1; Moral Phil., 9 and 1.</i>
11	Tu	
12	W	
13	Th	{ GRADUATION CEREMONIAL IN DIVINITY, LAW, ARTS, AND SCIENCE, AT 10 A.M. COMMEMORATION SERVICE IN ST GILES'S AT 12.
14	Fr	

1893—APRIL—continued.

15	Sa	
16	S	
17	M	{ <i>Meeting of University Court at 4 P.M. Edinburgh holiday.</i>
18	Tu	{ <i>Meeting of General Council at 3 P.M. Names of Candidates for Final Exam. in Medicine to be given in, Certificates shown, and Fees paid. University Library, and also the Reading Room in New Buildings, open from 10 A.M. to 1 P.M. till 24th April. Closed on Saturdays.</i>
19	W	
20	Th	
21	Fr	
22	Sa	
23	S	
24	M	
25	Tu	
26	W	
27	Th	
28	Fr	
29	Sa	{ <i>Last day for giving in Theses and paying Fees for M.D., and for D.Sc. in Public Health.</i>
30	S	

Calendar 1893-94.

MAY 1893.

S	7	14	21	28
M	1	8	15	22 29
Tu	2	9	16	23 30
W	3	10	17	24 31
Th	4	11	18	25
Fr	5	12	19	26
Sa	6	13	20	27

JUNE 1893.

S	4	11	18	25
M	5	12	19	26
Tu	6	13	20	27
W	7	14	21	28
Th	1	8	15	22 29
Fr	2	9	16	23 30
Sa	3	10	17	24

JULY 1893.

S	2	9	16	23 30
M	3	10	17	24 31
Tu	4	11	18	25
W	5	12	19	26
Th	6	13	20	27
Fr	7	14	21	28
Sa	1	8	15	22 29

AUGUST 1893.

S	6	13	20	27
M	7	14	21	28
Tu	1	8	15	22 29
W	2	9	16	23 30
Th	3	10	17	24 31
Fr	4	11	18	25
Sa	5	12	19	26

SEPTEMBER 1893.

S	3	10	17	24
M	4	11	18 ¹	25
Tu	5	12	19	26
W	6	13	20	27
Th	7	14	21	28
Fr	1	8	15	22 29
Sa	2	9	16	23 30

OCTOBER 1893.

S	1	8	15	22 29
M	2	9	16	23 30
Tu	3	10	17	24 31
W	4	11	18	25
Th	5	12	19	26
Fr	6	13	20	27
Sa	7	14	21	28

NOVEMBER 1893.

S	5	12	19	26
M	6	13	20	27
Tu	7	14	21	28
W	1	8	15	22 29
Th	2	9	16	23 30
Fr	3	10	17	24
Sa	4	11	18	25

DECEMBER 1893.

S	3	10	17	24 31
M	4	11	18	25 ²
Tu	5	12	19	26
W	6	13	20	27
Th	7	14	21	28
Fr	1	8	15	22 29
Sa	2	9	16	23 30

JANUARY 1894.

S	7	14	21	28
M	1	8	15	22 29
Tu	2	9	16	23 30
W	3	10	17	24 31
Th	4	11	18	25
Fr	5	12	19	26
Sa	6	13	20	27

FEBRUARY 1894.

S	4	11	18	25
M	5	12 ³	19	26
Tu	6	13 ⁴	20	27
W	7	14	21	28
Th	1	8	15	22
Fr	2	9	16	23
Sa	3	10	17	24

MARCH 1894.

S	4	11	18	25
M	5	12	19	26
Tu	6	13	20	27
W	7	14	21	28
Th	1	8	15	22 29
Fr	2	9	16	23 ⁵ 30
Sa	3	10	17	24 31

APRIL 1894.

S	1	8	15	22 29
M	2	9	16 ¹	23 30
Tu	3	10	17	24
W	4	11	18	25
Th	5	12	19	26
Fr	6	13	20	27
Sa	7	14	21	28

¹ Edinburgh Holiday.

² Christmas Day.

³ Holiday in Faculty of Arts.

⁴ Reid Concert.

⁵ Good Friday.

ADDRESSES OF THE PRINCIPAL AND PROFESSORS.

Principal Sir William Muir, Dean Park House.

Professor Goodhart, 2 Drumsheugh Gardens.

„ Butcher, 27 Palmerston Place.

„ Chrystal, 5 Belgrave Crescent.

„ Seth, 16 Church Hill.

„ Calderwood, Craigrowan, Napier Road, Merchiston.

„ Tait, 38 George Square.

„ Masson, 58 Great King Street.

„ Copeland, 15 Royal Terrace.

„ Wallace, The University.

„ Niecks, Music Class Room, Park Place.

„ Eggeling, 15 Hatton Place; Grange.

„ Armstrong, The University.

„ Geikie, 31 Merchiston Avenue.

„ Nicholson, Eden Lodge, Newbattle Terrace, Morningside.

„ Laurie, Nairne Lodge, Duddingston.

„ Baldwin Brown, 3 Rosebery Crescent.

„ Mackinnon, 1 Merchiston Place.

Rev. Professor Flint, Johnstone Lodge, Craigmillar Park.

„ Adams, Victoria Park, Trinity.

„ Taylor, 6 Greenhill Park.

„ Charteris, Cameron House, Dalkeith Road.

Professor Sir Ludovic Grant, Bart., 29 India Street.

„ Goudy, 2 Drummond Place.

„ Kirkpatrick, 5 Murrayfield.

„ Rankine, 23 Ainslie Place.

„ Sir Douglas Maclagan, 28 Heriot Row.

„ Wood, 16 Buckingham Terrace.

„ Bayley Balfour, Inverleith House.

„ Rutherford, 14 Douglas Crescent.

„ Grainger Stewart, 19 Charlotte Square.

„ Sir Wm. Turner, 6 Eton Terrace.

„ Crum Brown, 8 Belgrave Crescent.

- Professor Simpson, 52 Queen Street.
 „ Cossar Ewart, 2 Belford Park.
 „ Fraser, 13 Drumsheugh Gardens.
 „ Annandale, 34 Charlotte Square.
 „ Chiene, 26 Charlotte Square.
 „ Greenfield, 7 Heriot Row.

PROFESSORS EMERITI.

- George James Allman, LL.D., M.D., formerly Professor of Natural History ; Ardmore, Parkstone, Dorset.
 John Stuart Blackie, formerly Professor of Greek ; 9 Douglas Crescent.
 * Alexander Campbell Fraser, D.C.L., LL.D., formerly Professor of Logic and Metaphysics ; Gorton, Hawthornden, Midlothian.
 Norman Macpherson, LL.D., formerly Professor of Scots Law ; Millbank, Grange Loan.
 Sir Herbert Stanley Oakeley, D.C.L., LL.D., Mus. D., formerly Professor of Music ; 16 Suffolk Street, London, S.W.
 Charles Piazzì Smyth, LL.D., formerly Professor of Practical Astronomy ; Clova, Ripon.

PROFESSORS RESIGNED.

- Theodor Aufrecht, M.A., Ph.D., formerly Professor of Sanskrit ; The University, Bonn.
 Sir Archibald Geikie, LL.D., formerly Professor of Geology ; Museum of Geology, Jermyn Street, London.
 Sir Joseph Lister, Bart., LL.D., M.D., formerly Professor of Clinical Surgery ; 12 Park Crescent, Portland Place, London.
 Æneas James George Mackay, LL.D., Sheriff of Fife, Advocate, formerly Professor of History ; 7 Albyn Place, Edinburgh.
 Right Hon. Sir Lyon Playfair, K.C.B., LL.D., M.P., formerly Professor of Chemistry ; 68 Onslow Gardens, South Kensington, London.
 Robert Wallace, D.D., M.P., formerly Professor of Church History ; 50 Finborough Road, London, S.W.

University Officers.

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Date of Institution.	Chancellor.	Appointed
1859.	RIGHT HON. ARTHUR JAMES BALFOUR, M.P., D.C.L., LL.D., First Lord of the Treasury.....	1891

Vice-Chancellor.

1859.	SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D.....	1895
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Rector.

1859.	THE RIGHT HON. GEORGE JOACHIM GOSCHEN, M.P. LL.D., Chancellor of the Exchequer.....	1890
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Principal.

1852.	SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D.....	1885
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Representative in Parliament.

1868.	RIGHT HON. SIR CHARLES JOHN PEARSON, Q.C.....	1890
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University Court.

President—THE RECTOR.

THE PRINCIPAL	<i>Ex officio.</i>	
THE LORD PROVOST OF EDIN- BURGH.....	<i>Ex officio.</i>	
ÆNEAS J. G. MACKAY, LL.D., Advocate.....	Assessor, nominated by Chancellor...	1891
THE HON. LORD STORMONTH DARLING.....	Do. nominated by Rector	1887 & 1891
JAMES COLSTON	Do. elected by Town Council..	1886
PATRICK HERON WATSON, M.D., LL.D.	Do. elected by General Council	1887
THE RIGHT HON. JOHN H. A. MACDONALD, C.B., LL.D., Lord Justice-Clerk	Do. do. do.	1889
JOHN DUNCAN, M.D.....	Do. do. do.	1889
THOMAS M'KIE, Advocate.....	Do. do. do.	1889
MALCOLM CAMPBELL TAYLOR, D.D., Professor of Ecclesiastical History	Do. elected by Senatus.....	1889

				Appointed.
SIR WILLIAM TURNER, M.B.,	} Assessor, elected by Senatus.....			1889
D.C.L., LL.D., Professor of Anatomy)				
ALEXANDER CRUM BROWN,	} Do.	do.	do.	1889
M.D., D.Sc., Professor of Chemistry)				
SAMUEL HENRY BUTCHER,	} Do.	do.	do.	1891
LL.D., Professor of Greek.....)				
Secretary —JOHN CHRISTISON, W.S.				
Factor and Law Agent —HENRY COOK, W.S.				
Auditor —THOMAS GOLDIE DICKSON, C.A.				
Clerk —THOMAS GILBERT.				
Assistant Clerk —JAMES DOWIE.				
Secretary's Clerk —GEORGE CAMPBELL.				

Curators of Patronage.

PRINCIPAL SIR WILLIAM MUIR	Elected by University Court ..	Dec. 1887
RIGHT HON. J. H. A. MACDONALD,	} Elected by do.	Feb. 1890
C.B., LL.D., Lord Justice-Clerk.....		
PATRICK HERON WATSON, M.D.,	} Elected by do.	April 1891
LL.D.		
RIGHT HON. JAMES ALEXANDER	} Elected by Town Council	Dec. 1891
RUSSELL, Lord Provost.....		
JOHN CLAPPERTON.....	Elected by do.	June 1885
SIR THOS. CLARK, Bart.	Elected by do.	Jan. 1886
JAMES M'INTOSH, S.S.C.....	Elected by do.	June 1889
Secretary —R. HERBERT JOHNSTON, W.S., 66 Frederick Street.		

Senatus Academicus.

President—THE PRINCIPAL.

Secretary—PROFESSOR KIRKPATRICK.

FACULTY OF ARTS.

Dean—GEORGE CHRYS TAL, LL.D., Professor of Mathematics.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1583	Humanity	HARRY CHESTER GOOD- HART, M.A.	1891	Lds. of Ses., Cur., Fac. of Adv., and W.S. Soc. ¹
1583	Greek	SAMUEL HENRY BUT- CHER, LL.D.	1882	Curators.
1583	Mathematics	GEO. CHRYS TAL, LL.D...	1879	Curators.
1583	Logic & Metaphysics .	ANDREW SETH, LL D..	1891	Curators.
1583	Moral Philosophy	HENRY CALDERWOOD, LL.D.	1863	Curators.
1583	Natural Philosophy ...	PETER GUTHRIE TAIT, M.A., D.Sc.	1860	Curators.
1760	Rhetoric and English Literature	DAVID MASSON, LL.D..	1865	Crown.
1719	History	JOHN KIRKPATRICK, LL.B., LL.D.	1881	Fac. of Adv., & Cur.
1786	Practical Astronomy	RALPH COPELAND, Ph.D.	1889	Crown.

¹ The Judges of the Court of Session nominate two Delegates, the Curators two, the Faculty of Advocates one, and the Society of Writers to the Signet one. These Delegates appoint the Professor, who receives his Commission from the Curators.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1790	Agriculture & Rural Economy	ROBERT WALLACE.....	1885	Lds. of Sess., Cur & Univ. Ct. ¹
1839	Music ²	FREDERICK NIECKS.....	1891	Univ. Court.
1862	Sanskrit and Comparative Philology ³	JULIUS EGGELING, Ph.D.	1875	Crown.
1868	Engineering ⁴	GEORGE FREDERICK ARMSTRONG, M.A., M. Inst., C.E.	1885	Crown.
1871	Geology ⁵	JAMES GEIKIE, LL.D....	1882	Crown.
1871	Commercial & Political Economy & Mercantile Law ⁶	JOSEPH SHIELD NICHOLSON, M.A., D.Sc.	1880	Cur., & Merch. Co.
1876	Theory, History, and Practice of Education ⁷	SIMON SOMERVILLE LAURIE, LL.D.	1876	Bell Trustees.
1879	Fine Art ⁸	GERARD BALDWIN BROWN, M.A.	1880	Univ. Ct., Pres. R. Scott. Acad.
1882	Celtic Languages, History, Literature, and Antiquities ⁹	DONALD MACKINNON, M.A.	1882	Cur., & Emeritus Prof. Blackie.

FACULTY OF DIVINITY.

Dean—MALCOLM CAMPBELL TAYLOR, D.D., Professor of Ecclesiastical History.

1583	Divinity	ROBERT FLINT, D.D.....	1876	Curators.
1642	Hebrew and Oriental Languages	DAVID LAIRD ADAMS, M.A., B.D., D.D.	1880	Curators.
1694	Ecclesiastical History	MALCOLM CAMPBELL TAYLOR, D.D.	1877	Crown.
1846	Biblical Criticism & Biblical Antiquities	ARCHIBALD HAMILTON CHARTERIS, D.D.	1868	Crown.

FACULTY OF LAW.

Dean—JOHN KIRKPATRICK, M.A., LL.B., LL.D., Dr Jur., Professor of History.

1707	Public Law	SIR LUDOVIC GRANT, Bart., B.A.	1890	Crown.
1710	Civil Law	HENRY GOUDY, LL.B....	1889	Fac. of Adv., and Cur. ¹⁰

¹ The Professor is elected by nine Delegates, three chosen by the Judges of the Court of Session, three by the Curators, and three by the University Court.

² This Chair was endowed by General John Reid.

³ This Chair was endowed by John Muir, LL.D. (Edin.), D.C.L. (Oxon.), late of the Bengal Civil Service, and by a Parliamentary vote of £200.

⁴ This Chair was endowed in 1868 by Sir David Baxter, and by an annual vote of Parliament of £200.

⁵ This Chair was endowed in 1871 by a sum of £6000 mortified by Sir Roderick Impey Murchison, Bart., and by an annual vote by Parliament of £200.

⁶ This Chair was endowed in 1871 by the Merchant Company of Edinburgh, and other Governors of George Watson's and Daniel Stewart's Hospitals, who have granted a salary of £450 as the endowment.

⁷ This Chair was endowed by the Trustees of the late Dr A. Bell, who granted a sum of £6000 for the purpose, to which a further sum of £4500 out of the Bell Fund was added by the Educational Endowments Commission in 1887.

⁸ This Chair was endowed by Mr H. G. and Miss Frances Watson.

⁹ Endowed with a sum of £14,000, raised by public subscription.

¹⁰ For this Chair the Faculty of Advocates send to the Curators a list of two, of whom the Curators must choose one.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1719	History	JOHN KIRKPATRICK, LL.B., LL.D.	1881	Fac. of Adv., and Cur. ¹
1722	Scots Law	JOHN RANKINE, M.A., LL.D.	1888	Do. ¹
1807	Medical Jurisprudence and Police	Sir DOUGLAS MAC- LAGAN, M.D.	1862	Crown.
1825	Conveyancing	JOHN PHILP WOOD, W.S.	1891	Cur., Dep.-Kpr. and W.S. Soc. ³
1871	Commercial and Political Economy and Mercantile Law	JOSEPH SHIELD NICHOLSON, M.A., D.Sc.	1880	Cur., & Merch. Co.

FACULTY OF MEDICINE.

Dean—THOMAS RICHARD FRASER, M.D. F.R.S., Professor of Materia Medica.

1676	Botany	BAYLEY BALFOUR, M.D.	1888	Curators.
1685	Institutes of Medicine	WM. RUTHERFORD, M.D.	1874	Curators.
1685	Practice of Physic	THOMAS GRAINGER STEWART, M.D.	1876	Curators.
1705	Anatomy	Sir WM. TURNER, M.B.	1867	Curators.
1713	Chemistry & Chemical Pharmacy	ALEX. CRUM BROWN, M.D.	1869	Curators.
1726	Midwifery & Diseases of Women & Children	ALEX. RUSSELL SIMPSON, M.D.	1870	Curators.
1741	Clinical Medicine	THOMAS GRAINGER STEWART, M.D.	1876	
		THOMAS RICHARD FRASER, M.D.	1877	
		WILLIAM SMITH GREEN- FIELD, M.D.	1881	
		Diseases of Women— ALEXANDER RUSSELL SIMPSON, M.D.	1870	
1767	Natural History	JAMES COSSAR EWART, M.D.	1882	Crown.
1768	Materia Medica	THOMAS RICHARD FRASER, M.D.	1877	Curators.
1803	Clinical Surgery	THOS. ANNANDALE, M.D.	1877	Crown
1807	Medical Jurisprudence	Sir DOUGLAS MAC- LAGAN, M.D.	1862	Crown.
1831	Surgery	JOHN CHIENE, M.D.....	1882	Curators.
1831	General Pathology	WILLIAM SMITH GREEN- FIELD, M.D.	1881	Curators.

UNIVERSITY LECTURERS.

Gifford Lecturer on Natural Theology	Professor OTTO PFLEIDERER, of Berlin University. 1892.
Forestry	Colonel F. BAILEY, R.E. 1892.
Agricultural Entomology	WILLIAM FREAM, LL.D., B.Sc. 1891
Civil and Criminal Procedure.	JOHN P. COLDSTREAM, W.S. 1884.

¹ For each of these Chairs the Faculty of Advocates send to the Curators a list of two, of whom the Curators must choose one.² Endowed by the Society of Writers to the Signet.³ The Election is by—(1) Two Delegates from the Curators; (2) Two from the Society of Writers to the Signet; and (3) The Deputy-Keeper of the Signet.

Mental Diseases.....	THOMAS S. CLOUSTON, M.D. 1879.
Diseases of the Eye.....	DOUGLAS ARGYLL ROBERTSON, M.D. 1883.
Clinical Instruction on	JAMES CARMICHAEL, M.D. 1885.
Diseases of Children	JOHN PLAYFAIR, M.B. 1889.
Comparative Embryology	GEORGE BROOK. 1885.

ASSISTANTS TO PROFESSORS.

IN THE FACULTY OF ARTS.

Humanity.....	FRANCIS R. JAMIESON, M.A.
Greek.....	ALEX. DOUGLAS THOMSON, M.A.
Mathematics.....	R. E. ALLARDICE, M.A.
Logic and Metaphysics.....	R. P. HARDIE, M.A. (Edin.), B.A. (Oxon.)
Moral Philosophy.....	CHARLES M. DOUGLAS, M.A.
Natural Philosophy.....	WILLIAM PEDDIE, D.Sc.
Do. (Mechanical)	THOMAS LINDSAY.
Rhetoric and Eng. Liter....	GEO. GREGORY SMITH, M.A. (Edin.), B.A. (Oxon.)
Agriculture.....	J. WILLIAM WALLACE.
Engineering.....	W. C. POPPLEWELL, B.Sc.
Geology.....	GEORGE S. CORSTORPHINE, B.Sc.

IN THE FACULTY OF DIVINITY.

Hebrew and Oriental Languages	JOHN WILLIAM MURRAY.
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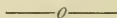
IN THE FACULTY OF LAW.

Civil Law.....	JAMES MACKINTOSH, M.A.
Scots Law.....	JAMES BLACKLOCK, DAVID MARSHALL.
Conveyancing.....	JOHN M'NAY, JAMES M'ROBIE, JAMES F. FAIR-WEATHER.

IN THE FACULTY OF MEDICINE.

Botany.....	JAMES ADAM TERRAS, B.Sc.
Institutes of Medicine.....	E.W. CARLIER, M.D., B.Sc.; ARTHUR J. WHITING, M.B., C.M.
Practice of Physic.....	ROBERT A. FLEMING, M.A., M.B., C.M.
Anatomy.....	DAVID HEPBURN, M.D., C.M.; JAMES MUSGROVE, M.D.; JAMES SIMPSON.
Chemistry.....	JOHN GIBSON, Ph.D.; LEONARD DOBBIN, Ph.D.; HUGH MARSHALL, D.Sc.; JAMES WALKER, D.Sc., Ph.D.; and THEODORE RETTIE, B.Sc.
Midwifery.....	J. CLARENCE WEBSTER, M.D., and W. MURRAY CAIRNS, M.B., C.M.
Clinical Medicine Tutors...	JOSEPH TILLIE, M.D.; ROBERT MUIR, M.D.; ROBERT A. FLEMING, M.A., M.B., C.M.
Clinical Medicine.....	For Winter 1891-92—JOHN SPURWAY, M.B., C.M.; JOHN LIVINGSTONE, M.B., C.M.; DAVID STUART, M.B., C.M.; and WM. MURRAY CAIRNS, M.B., C.M.—For Summer 1892—A. STODART WALKER, M.B., C.M.; EDWARD BARNARD FULLER, M.B., C.M.; WILLIAM BLACKLEY DRUMMOND, M.B., C.M.; WILLIAM MURRAY CAIRNS, M.B., C.M. and R. J. A. BERRY, M.B., C.M.
Natural History.....	J. BEARD, B.Sc., Ph.D., and others.
Materia Medica.....	JOSEPH TILLIE, M.D.; WM. C. SILLAR, M.B., C.M., B.Sc.
Clinical Surgery Tutor.....	A. LOGAN TURNER, M.B., C.M.
Clinical Surgery.....	J. W. DOWDEN, M.B., C.M., A. J. BERRY, M.B., C.M.; CHARLES ARTHUR STURROCK, M.A., M.B., C.M.

Medical Jurisprudence	CHARLES HUNTER STEWART, M.B., C.M., B.Sc.
Surgery	DAVID WALLACE, M.B., C.M.; HAROLD J. STILES, M.B., C.M.; WILLIAM HUTTON, M.B., C.M.; JOHN ANDERSON, M.B., C.M.
Pathology	ROBERT MUIR, M.A., M.D.; DAVID STUART, M.B., C.M.



Examiners for Degrees, &c.

IN THE FACULTY OF ARTS.

The Professors of Humanity, Mathematics, Greek, Logic and Metaphysics, Moral Philosophy, Natural Philosophy, Rhetoric and English Literature, Chemistry, Botany, Natural History, and Geology, and the following additional Examiners:—

Mathematics	WILLIAM HARVEY, B.A., LL.B.	Appointed 1888
Mental Philosophy	WILLIAM L. DAVIDSON, M.A., LL.D.	1889
Classical Literature	NORMAN M'LEAN, M.A.	1891

IN THE FACULTY OF DIVINITY.

The Professors of the Faculty of Divinity, and the following additional Examiners:—
WILLIAM HASTIE, B.D. Appointed 1889.
THOMAS A. BICKERTON, B.D. Re-appointed 1892.

IN THE FACULTY OF LAW.

The Professors of the Faculty of Law, with the Examiners in Arts and Professor EGGEING for Preliminary Examinations, and the following additional Examiners:—

JAMES REID, LL.B. Appointed Jan. 1890.
FREDERICK PARKER WALTON, LL.B. Appointed Jan. 1892.

IN THE FACULTY OF MEDICINE.

The Professors of the Faculty of Medicine, with the Examiners in Arts and Professor EGGEING for Preliminary Examinations, and the following additional Examiners:—

Practice of Physic	ALEX. HUGHES BENNETT, M.D.	Appointed 1888
Midwifery	D. BERRY HART, M.D.	1888
Anatomy	JOHNSON SYMINGTON, M.D.	1888
Chemistry	W. H. PERKIN, Jun., Ph.D.	1888
Botany	H. MARSHALL WARD, M.A.	1888
Natural History	W. HERDMAN, D.Sc.	1890
Clinical Surgery	J. CRAWFORD RENTON, M.D.	1890
Materia Medica	WILLIAM CRAIG, M.D.	1892
Physiology	Prof. WM. STIRLING, M.D., D.Sc.	1892
Pathology	ALEXANDER BRUCE, M.D.	1892
Surgery	GEORGE THOMAS BEATSON, M.D.	1892
Clinical Medicine	JOHN WYLLIE, M.D.	1892
Medical Jurisprudence	FRED. W. BARRY, M.D., D.Sc.	1892

IN SCIENCE.

PRELIMINARY EXAMINATION.

The Examiners for Degrees in Arts, and Professor EGGELING.

MENTAL SCIENCE.

The Professors of Logic and Metaphysics, and of Moral Philosophy.

PHILOLOGY.

The Professors of Humanity, Greek, Hebrew and Oriental Languages, and of Sanskrit and Comparative Philology.

PHYSICAL AND NATURAL SCIENCE.

The Professors of Mathematics, Natural Philosophy, Chemistry, Botany, Natural History, Physiology, and Geology, and the additional Examiners in Mathematics, Chemistry, Botany, and Natural History.

ENGINEERING.

The Professors of Mathematics, Natural Philosophy, Chemistry, and Engineering, the additional Examiners in Mathematics and Chemistry, and in

Engineering ALEXANDER LESLIE, M. Inst. E.C..... 1892

PUBLIC HEALTH.

The Professors of Chemistry, Natural Philosophy, Practice of Physic, Materia Medica, Medical Jurisprudence, and Engineering, and the additional Examiners in Mathematics, Chemistry, and Medical Jurisprudence.

AGRICULTURE.

The Professors of Agriculture, Chemistry, Botany, Natural History, Geology, Political Economy, and Engineering, and the following additional Examiners :—
The additional Examiners in Chemistry, Botany, and Natural History, and in

Agriculture	GILBERT MURRAY.....	1890
Veterinary Hygiene	Principals WILLIAMS and WALLEY...	1890
Chemistry as applied to Agriculture	J. AUGUSTUS VOELCKER, B.A., D.Sc.	1890

FOR SCHOOLMASTER'S DIPLOMA.

The Professor of Education and MAURICE PATERSON, B.A., LL.D. 1889

FOR TITLE OF LITERATE IN ARTS.

The Professors of the Subjects, and the Examiners for Degrees in Arts.

—o—

University Librarian.

HUGH ALEXANDER WEBSTER.

Assistants.

ALEXANDER ANDERSON.	CHARLES MARTIN.
JAMES H. S. GREGORY.	GEORGE TAIT.
DAVID CUTHBERTSON.	
WILLIAM WRIGHT, at University New Buildings.	

Keepers of Museums.

Museum of Natural History	Professor EWART.
Anatomical Museum	Professor Sir WM. TURNER.
Assistant	JAMES SIMPSON.

—o—

Clerk of Senatus, and Sec. and	THOMAS GILBERT.
Reg. of General Council	
Assistant Clerks	JAMES OLIVER SINCLAIR, JAMES DOWIE.
Clerk of Works	ALLAN E. L. CLARK.
Janitor	JOHN CHAPMAN.
Warders	ALEX. ADAIR, JAMES DONALDSON.

Staff of Twelve Servitors.

University of Edinburgh.



CONSTITUTION.

THE University of Edinburgh has grown into its present status out of what was originally a small College, called the "College of Edinburgh" or "The Town's College," which was founded in 1583 by the Town Council of Edinburgh, under the general powers to found educational institutions granted to them by the Charter of King James VI., dated 14th April 1582. No separate Charter of foundation is now extant; but from the first the College possessed the privilege of conferring degrees. This privilege was ratified by the "Act of Confirmation," an Act of Parliament passed in 1621, which secured to the "College of James VI." (as it had come to be called) all the rights, immunities, and privileges enjoyed by the Universities of Scotland. This ratification was renewed in the Treaty of Union between England and Scotland, and in the Act of Security. Gradually, in Acts of General Assembly, Acts of Town Council, and Acts of Parliament, the "College of James VI." came to be styled "The University of Edinburgh." But the institution remained under the absolute control and patronage of the Town Council of Edinburgh down to 1858, when, by the Universities (Scotland) Act, all the Universities of Scotland received new and autonomous constitutions.

The University of Edinburgh is a Corporation consisting of the Chancellor, Rector, Principal, Professors, Registered Graduates and Alumni, and Matriculated Students; and from 1858 to 1890 its government was vested in the *Senatus Academicus*, subject to the review and control of the University Court.

By the Universities (Scotland) Act, 1889, the University Court was constituted a body corporate with perpetual succes-

sion and a Common Seal ; and the whole property, heritable and movable, belonging to the University, at the date of the passing of the Act, was transferred to and vested in the Court, with power to administer and manage the whole revenue and property of the University.

In addition to the various Endowments for Chairs, Fellowships, Scholarships, Bursaries, &c., the University possesses the property of the Old and New University Buildings, with the Libraries, Museums, Laboratories, Specimens, Apparatus, Furnishings, and Fittings ; the Music Class Room, containing a large organ, an interesting collection of Acoustic and Antique Musical Instruments, and a valuable Library of Music ; and the official residence of the Principal.

The Senatus Academicus, as heretofore, regulates and superintends the teaching and discipline of the University, subject to the provisions of the Universities (Scotland) Acts of 1858 and 1889.

It may be interesting to show the numbers of Matriculated Students in the University, and the numbers of Degrees conferred by the University, immediately before the Acts of 1858 and of 1889 respectively came into operation.

The numbers of Matriculated Students were :—

	Arts.	Divinity.	Law.	Medicine.	Total.
In 1858-59	573	90	237	526	1336
In 1888-89	1022	109	471	1949	3551

The numbers of Degrees conferred were :—

	Arts.	Divinity.	Law.	Medicine. M.B., C.M.	M.D.	Science. B.Sc. D.Sc.
In 1859	16	—	—	—	60	—
In 1889	116	11	23	210	60	34

The Degrees in Divinity, Law, and Science were instituted since 1859.

CHANCELLOR.

The Chancellor is elected for life by the General Council. He is the Head of the University. Changes in its ordinances and in its internal arrangements, proposed or approved by the Univer-

sity Court, must receive his sanction. All Degrees are conferred by him, or his deputy, the Vice-Chancellor. The Chancellor is President of the General Council, and nominates an Assessor in the University Court. The appointments have been as follows:—

Right Hon. Lord Brougham, 1859.

Right Hon. John Inglis, D.C.L., LL.D., 1868.

Right Hon. ARTHUR J. BALFOUR, M.P., D.C.L., LL.D., &c., 1891.

VICE-CHANCELLOR.

The Vice-Chancellor is nominated by the Chancellor. He may, in the absence of the Chancellor, confer Degrees, but cannot discharge any other of the Chancellor's duties. In the Vice-Chancellor's absence Degrees are conferred by the Principal, or, in his absence, by the senior member of Senatus present.

Upon the Vice-Chancellor is imposed the duty of acting as Returning Officer at Parliamentary Elections. If there be no Vice-Chancellor at the time of an Election, the University Court appoints one to act as Returning Officer. The appointments have been—

Sir D. Brewster, appointed 1860.
Sir Alexander Grant, Bart., 1868.

Sir WILLIAM MUIR, K.C.S.I.,
D.C.L., &c., 1885.

RECTOR.

The Rector is elected by the Matriculated Students on the second Saturday after the beginning of the Winter Session. The term of office is three years. The next election will take place in 1893. The Rector is President of the University Court, and nominates an Assessor in the University Court. No Principal or Professor of any Scottish University is eligible for the office of Rector. The appointments have been—

Rt. Hon. W. E. Gladstone, 1859.
Thomas Carlyle, 1865.

Rt. Hon. Lord Moncreiff, 1868.
Sir W. Stirling Maxwell, Bt., 1871.

Rt. Hon. Earl of Derby, 1874.
Most Hon. Marquess of Harting-
ton, M.P., 1877.

Rt. Hon. Earl of Rosebery, 1880.
Rt. Hon. Earl of Iddesleigh, 1883.

Most Hon. Marquess of Lothian,
1887.

Rt. Hon. GEORGE J. GOSCHEN,
M.P., LL.D., 1890.

REPRESENTATIVE IN PARLIAMENT.

In accordance with Clauses 27 to 41 of the “Representation of the People (Scotland) Act,” 31 & 32 Vict., cap. 48, the Members of the General Councils of the Universities of Edinburgh and St Andrews elect a Member to serve in Parliament for these Universities.

When a poll is demanded, the votes are given by voting papers issued by the Registrar.

The appointments have been—

Sir Lyon Playfair, K.C.B., LL.D., 1868.

Rt. Hon. J. H. A. Macdonald, C.B., Q.C., LL.D., 1885, 1886.

M. T. Stormonth Darling, Q.C., 1888.

Sir CHARLES JOHN PEARSON, Q.C., 1890.

The Parliamentary constituency for 1892 is as follows :—

Edinburgh.....6885

St Andrews.....1518

Total in 1892.....8403

UNIVERSITY COURT.

The University Court has the following powers conferred by the “Universities Scotland Act, 1858,” Sec. xii. :—

1. To review all decisions of the Senatus Academicus, and to be a Court of Appeal from the Senatus in every case, except as otherwise provided in the Universities Act :
2. To effect improvements in the internal arrangements of the University, after due communication with the Senatus Academicus, and with the sanction of the Chancellor ; provided that all such proposed improvements shall be submitted to the general Council for their consideration :
3. To require due attention on the part of the Professors to the Regulations as to the mode of teaching and other duties imposed on the Professors :
4. To fix and regulate, from time to time, the Fees in the several Classes :
5. Upon sufficient cause shewn, and after due investigation, to censure any member of the Senatus Academicus, or to suspend him from his office, and from the emoluments thereof, in whole or in part, for any period not exceeding one year, or to require him to retire from his office on a retiring allowance, or to deprive him of his office ; and during the Suspension of any Professor, to make due provision for the teaching of his class : Provided always that no such sentence of censure, suspension, or deprivation, or requisition on a Professor to retire from office, shall have any effect until it has been approved by Her Majesty in Council :

By Sec. xix. any of the Rules, Statutes, and Ordinances enacted by the Universities Commissioners for the purposes of the Act, may be altered or revoked by the University Court of the University to which the same are applicable, but only with the consent, expressed in writing, of the Chancellor thereof, and with the approval of Her Majesty in Council.

By the Universities (Scotland) Act, 1889, Section 5, Sub-section (3), the University Court is a body corporate with perpetual succession and a common seal; and all the property belonging to the University, or to any existing college forming part of the University at the date of the passing of the Act, is thereby declared to be vested in the University Court.

By Section 6 of the last mentioned Act, the University Court, in addition to the powers conferred upon it by the Universities (Scotland) Act, 1858, subject to any ordinances made by the Commissioners, has power—

- (1.) To administer and manage the whole revenue and property of the University, and the college or colleges thereof existing at the passing of this Act, including the share appropriated to such University out of the annual grant hereinafter mentioned, and also including funds mortified for bursaries and other purposes, and to appoint factors or collectors, to grant leases, to draw rents, and generally to have all the powers necessary for the management and administration of the said revenue and property :
- (2.) To review any decision of the Senatus Academicus on a matter within its competency which may be appealed against by a member of the Senatus, or other member of the University having an interest in the decision, within such time as may be fixed by the Commissioners, and to take into consideration all representations and reports made to it by the Senatus Academicus and by the general council :
- (3.) To review, on representation made by any of its members, or by any member of the Senatus Academicus, within such time as may be fixed by the Commissioners, any decision which the Senatus Academicus may come to in the exercise of its powers under section seven, sub-section one : Provided always, that the University Court shall not review any decision of the Senatus Academicus in a matter of discipline, except upon appeal taken either by a member of the Senatus or by a member of the University directly affected by such decision :
- (4.) To appoint professors whose chairs are, or may come to be, in the patronage of the University ; to appoint examiners and lecturers; and to grant recognition to the teaching of any college or individual teacher for the purposes of graduation, under any regulations on the subject laid down by the Commissioners, which regulations after the expiration of their powers may from time to time be modified or altered by the Universities Committee :
- (5.) To define on application by any member of the Senatus Academicus the nature and limits of a professor's duties under his commission, subject to appeal to the Universities Committee :

- (6.) To take proceedings against a principal or professor, University lecturer, assistant, recognised teacher or examiner, or any other person employed in teaching or examining under section twelve, sub-section five, of the Universities (Scotland) Act, 1858, without the necessity of any one not a member of the Court appearing as prosecutor, and for the purposes of such proceedings to call before it any member of the University to give evidence, and to require the production of documents, and also to institute and conduct any such inquiries as it may deem necessary :
- (7.) To appoint from among members of the University or others, not being members of the Senatus Academicus, one third of the members of any standing committee or committees charged, by ordinance of the Commissioners under this Act, with the immediate superintendence of any libraries or museums, or the contents thereof, belonging to the University and college or colleges thereof existing at the passing of this Act, and on representation made by any of its members, or by any member of the Senatus Academicus, to review any decision which the Senatus Academicus, in the exercise of its powers, may come to in respect of the recommendations of such committee or committees :
- (8.) To appoint committees of its own number consisting of not less than five members, with powers to report on any business that may be entrusted to them by the University Court, or to carry out special instructions ordered by the University Court :
- (9.) To elect the representative of the University on the General Medical Council, under the Medical Act, 1886 :
- (10.) After the expiration of the powers of the Commission to found new professorships with the approval of the Universities Committee, and after such expiration no new professorship shall be founded except as herein [in the Act of 1889] provided.

After the expiration of the powers of the Commissioners, the University Court, by Section 21, shall have power to make such ordinances as they think fit, with the approval of Her Majesty in Council :

- (1.) With respect to the appropriation of the sum allotted to such University by the Commissioners out of the annual grant hereinafter referred to ;
- (2.) Altering or revoking any of the ordinances affecting such University which have been or may be framed and passed under the Universities (Scotland) Act, 1858, or this Act, and making new ordinances :

Provided that such ordinances, before being submitted to Her Majesty for approval, shall have been communicated by the University Court to the Senatus Academicus and to the General Council, whose opinion thereon, if returned to the University Court within one month, shall have been taken into consideration ; provided also that the said ordinances, when finally adjusted by the University Court, shall have been communicated to the University Courts of the other Universities, and that, if notice of dissent to such ordinances shall have been taken by any University Court, or by any person directly affected by such ordinance, to the University Court making such

ordinances within one month after the receipt thereof, the dissenting University Court or person may within one month after notifying dissent make a representation in regard thereto to Her Majesty in Council ; provided further that no ordinance made under this section shall be of any validity until it has been approved by Her Majesty in Council, and that it shall be lawful for Her Majesty to refer such ordinances to the Universities Committee, who shall report to Her Majesty thereon : Provided further, that such ordinances shall be laid before both Houses of Parliament in the manner provided by section twenty of this Act : Provided further, that in computing the period of one month for the purposes of this section, the months of August and September shall not be counted, nor any part thereof.

Stated Meetings of the Court are held for the despatch of ordinary business on the Monday occurring during the seven days beginning on the 12th and ending on the 18th, both days inclusive, of each month, excepting the months of August and September, and on the first Monday after 19th January, if necessary, for hearing Registration Appeals. Other Ordinary Meetings may be called as the Court may direct. Special Meetings may at any time be called by order of the Rector or the Principal, or by the Secretary on a requisition specifying the object, signed by at least three members of the Court. Appointments of Examiners in the Faculties of Divinity, Law, and Medicine, and in Science are made at the monthly meeting in January ; and of Examiners in Arts at the monthly meeting in July. Appointments of Class Assistants are required to be submitted for approval on the third Monday in November. Appointments of Assistant Registrars are made on the third Monday of January.

The University Court holds the patronage of the Chair of Music, and, in conjunction with the President of the Royal Scottish Academy, that of the Chair of Fine Art, as well as a share in the patronage of the Chair of Agriculture. It also elects three of the seven Curators, and appoints the Additional Examiners for Degrees in Arts, Science, Divinity, Law, and Medicine, and the Examiner for the Schoolmaster's Diploma. The appointments of those Assistants to Professors provided for by Ordinance of the Universities Commissioners are subject to its approval.

The Court consists of the following members, viz. :—1. The Rector; 2. The Principal; 3. The Lord Provost of Edinburgh for the time being; 4. An Assessor nominated by the Chancellor; 5. An Assessor nominated by the Rector; 6. An Assessor nominated by the Lord Provost, Magistrates, and Town Council of Edinburgh; 7. Four Assessors elected by the General Council; 8. Four Assessors elected by the Senatus Academicus; 9. Such number, not exceeding four in all, of representatives of affiliated Colleges as may be appointed under and subject to the arrangements made in terms of section fifteen, sub-section (4), of the Act of 1889: Provided always, that the total number of representatives of affiliated Colleges in the University Court of any University may be increased by the Commissioners or, after the expiration of their powers, by the Universities Committee, if in their opinion respectively special circumstances should arise to require such increase.

Seven members constitute a quorum. The Rector and his Assessor continue in office for three years; but in the event of the Chancellor or Rector ceasing to hold office, his Assessor continues to be a member of the University Court until an Assessor is nominated by the new Chancellor or Rector. The other Assessors continue in office for four years; but all Assessors are eligible for re-election, and no Principal or Professor of any Scottish University is eligible for election as Assessor to any other person or body than the Senatus Academicus. The Rector, and in his absence the Principal, presides at meetings of the University Court, and in the absence of both of them a chairman for the time is elected by the meeting. The person presiding at any meeting of the University Court has a deliberative vote, and also a casting vote in case of equality.

An abstract of the proceedings of the Court is given in a subsequent part of the Calendar.

The names of the present Assessors are given at page 1. The names of the Assessors previously to 1888 will be found in the Historical Appendix to List of University Graduates, published in 1889 (page 105). Former Assessors since 1888 —

Elected by Chancellor, T. Graham Murray, LL.D., 1887-1891.
Elected by Senatus Academicus, A. Campbell Fraser, D.C.L., LL.D., 1877-1891.

UNIVERSITIES COMMITTEE OF PRIVY COUNCIL.

There shall be a Committee of Her Majesty's Privy Council styled the Scottish Universities Committee of the Privy Council.

The Universities Committee shall consist of the Lord President of the Privy Council, the Secretary for Scotland, the Lord Justice General, if a member of the Privy Council, the Lord Justice Clerk, if a member of the Privy Council, the Lord Advocate, if a member of the Privy Council, the Chancellor of each of the Universities, if a member of the Privy Council, the Lord Rector of each of the Universities, if a member of the Privy Council, one member at least of the Judicial Committee of the Privy Council, and such other member or members of the Privy Council as Her Majesty may from time to time think fit to appoint.

The powers and duties of the Universities Committee may, subject to any rules or regulations which may from time to time be passed by Her Majesty in Council, be exercised and discharged by any three or more of the members of the Committee, one of whom shall be a member of the Judicial Committee of the Privy Council or one of Her Majesty's Senators of the College of Justice in Scotland.

CURATORS OF PATRONAGE.

By the Universities (Scotland) Act (1858), the patronage of the seventeen Chairs, previously in the gift of the Town Council, was transferred to seven Curators—three nominated by the University Court, and four by the Town Council. Besides these seventeen Chairs, the Curators have also a share in the patronage of those of Humanity, Agriculture, Civil Law, History, Celtic Languages and Literature, Law of Scotland, and Conveyancing, which was formerly possessed by the Town Council. The Curators hold office for three years. The names of the present Curators are given at page 2. The names of the former Curators will be found in the Historical Appendix to List of

University Graduates published in 1889 (pages 105 and 106).
Former Curators since 1888—

Elected by University Court.

T. Graham Murray, W.S., LL.D., 1884-91.

Elected by Town Council.

John Boyd, 1876-91.

REPRESENTATIVE IN GENERAL MEDICAL COUNCIL.

In accordance with the Medical Act of 1858, the Universities of Edinburgh and Aberdeen were entitled jointly to elect a Member of the "General Council of Medical Education and Registration of the United Kingdom." The appointments have been—

1858. James Syme.

1873. William Turner, M.B.

1868. John Macrobin, M.D.

1883. John Struthers, M.D.

Under the provisions of the Medical Act of 1886, Professor Sir William Turner was appointed in December 1886 for a period of five years, as representative of the University of Edinburgh.

1886. Sir William Turner, M.B., LL.D.

From 1858 to 1890 the Senatus exercised the right of election of the Representative of the University in the General Medical Council. By the Act of 1889, the Court is empowered to elect the Representative in future.

1891. Sir WILLIAM TURNER, M.B., LL.D.

PRINCIPAL.

The Principal, formerly elected by the Town Council, is now appointed by the Curators. The office is held for life. The Principal is the resident Head of the College, and President of the Senatus Academicus; and, in the absence of the Rector, he presides at the meetings of the University Court, and in the absence of the Chancellor and Rector he presides at the Statutory Meetings of the General Council, and also at the Special Meetings, excepting those for the election of Assessors.

PRINCIPALS ELECTED SINCE 1586.

1586. Robert Rollock, <i>previously</i> <i>Regent</i>	1716. William Wishart
1599. Henry Charteris	1730. William Hamilton
1620. Patrick Sands	1732. James Smith
1622. Robert Boyd	1736. William Wishart, <i>secundus</i>
1623. John Adamson	1754. John Gowdie
1653. Robert Leighton	1762. William Robertson
1662. William Colvill	1793. George Husband Baird
1675. Andrew Cant	1840. John Lee
1685. Alexander Monro	1859. Sir David Brewster
1690. Gilbert Rule	1868. Sir Alexander Grant, Bart.
1703. William Carstares	1885. Sir WM. MUIR, K.C.S.I.

SENATUS ACADEMICUS.

The Principal and the Professors constitute the Senatus Academicus. This body is entrusted with the superintendence and regulation of the teaching and discipline of the University. The Senatus elects four Assessors in the University Court who hold office for four years. Two retire biennially, but may be re-elected; and in the event of a casual vacancy, the person elected to fill such vacancy shall go out of office at the date when the person whom he succeeded would in the ordinary rotation have retired. It appoints two-thirds of the members of any standing committee or committees charged by ordinance of the Commissioners with the immediate superintendence of any libraries or museums, or the contents thereof, belonging to the University and college or colleges thereof existing at the passing of this Act; and receives in the first instance all reports by such committee or committees, and subject to the review of the University Court, confirms, modifies, or rejects the recommendations in such reports. It also elects a representative in the General Assembly of the Church of Scotland; two Managers of the Royal Infirmary; two Governors of George Heriot's Trust; two Governors of Morrison's Academy, Crieff; two Governors of the Spence Bursary Trust; one Governor of Dollar Institution; one Governor of Stiell's Hospital, Tranent; two-thirds of the University Library Committee; and two-thirds of the University Museum Committee Degrees in Arts, Divinity, Law, Medicine, and Science are con-

ferred, on the recommendation of the Senatus, by the Chancellor or Vice-Chancellor, and in the absence of both, by the Principal or senior Professor present. The Principal is President, with a deliberative and also a casting vote. In the absence of the Principal, the Senior Professor present acts as Chairman, also with a double vote. The Ordinary Meetings of Senatus are held on Saturday 22nd October, the last Saturday of November, January, February, and March; on the Saturday immediately preceding the Christmas holidays; on the last Friday of May, June, and July; on 1st August, not being a Sunday (for conferring Degrees in Law, Medicine, Science, &c.); and in April (for Degrees in Arts, Divinity, Law, &c.), on a day fixed at the Meeting in the January of the preceding year. Extraordinary Meetings may be called by the Principal or by three Professors. One-third of the Senatus constitutes a quorum.

The business of the Senatus is conducted by the Secretary, who, among other duties, summons the Meetings, prepares the Minutes, and intimates business assigned to the Principal, to the Deans of Faculties, or to the Conveners of Committees. The Secretary also administers the *Sponsio Academica* to Graduates.

FACULTIES.

The University contains four Faculties, and a Science Degrees Committee. Each Faculty is presided over by a Dean, who is elected from among the Professors of the Faculty, with the approval of the Senatus. Persons recommended for Degrees in each Faculty are presented to the Senatus by the Dean to whom all communications regarding the administration of the Faculty should be addressed. Persons recommended for Degrees in Science are presented by the Convener of the Section in which the Degrees are conferred. The Deans of the Faculties are mentioned at pp. 2, 3, and 4.

FACULTY OF ARTS.

The Faculty of Arts, the most ancient in the University, comprehends the Chairs of Humanity (Latin), Mathematics, Greek, Logic and Metaphysics, Moral Philosophy, Natural Philosophy, and Rhetoric and English Literature. Attendance on these

Classes only is at present required for the Degree of Master of Arts.

To the Faculty of Arts also belong the Chairs of History (in conjunction with the Faculty of Law), Practical Astronomy, Agriculture, Music, Sanskrit, Civil Engineering, Geology, Political Economy (in conjunction with the Faculty of Law), Theory of Education, Fine Art, and the Celtic Languages and Literature.

REGENTS AND PROFESSORS IN THE FACULTY OF ARTS SINCE 1583.

Regents of Philosophy from 1583 to 1708.

[*The Regents of Philosophy taught in rotation the four classes in the Curriculum of Arts, the "Bajans," the "Semi-Bajans," the "Bachelors," and the "Magistrands," as the Students of the first, second, third, and fourth year were respectively styled. Each Regent therefore taught every subject in the Curriculum—the Regent of Humanity being subordinate to the Regent of Philosophy, and being employed as a tutor in Classics for Unmatriculated Students. In 1708 the system was changed, and separate Professors for Latin, Greek, Logic and Metaphysics, Moral Philosophy and Natural Philosophy, were substituted for the Regents. A Professorship of Mathematics had previously existed.*]

- 1583. Robt. Rollock, *first Regent*
- 1583. Duncan Nairn
- 1585. Charles Lumisdaill
- 1586. Adam Colt
- 1586. Alexander Scrimgeour
- 1587. Philip Heslop
- 1588. Charles FermeorFairholm
- 1589. Henry Charteris
- 1589. Patrick Sands
- 1594. George Robertson
- 1597. William Craig
- 1597. John Adamson
- 1598. James Knox
- 1598. Robert Scott
- 1601. Andrew Young
- 1603. James Reid
- 1604. David Munro
- 1606. Blase Colt
- 1607. James Fairley

- 1608. William King
- 1611. Andrew Stevenson
- 1625. Samuel Rutherford
- 1625. Robert Ranken
- 1626. Thomas Crawford
- 1626. John Brown
- 1631. Alexander Hepburn
- 1636. James Wyseman
- 1638. James Wright
- 1638. Robert Young
- 1639. Duncan Forrester
- 1644. William Tweedie
- 1644. James Pillans
- 1647. Andrew Suttie
- 1653. John Wishart
- 1665. George Sinclair
- 1666. John Wood
- 1667. William Paterson
- 1679. Gilbert M'Murdoch
- 1679. Andrew Massie
- 1680. Alexander Cockburn
- 1682. Robert Lidderdail
- 1684. Herbert Kennedy
- 1686. Thomas Burnet
- 1689. Alexander Cunningham
- 1690. William Law
- 1695. John Row
- 1695. William Scott
- 1701. Charles Areskine
- 1703. Robert Stewart
- 1707. Colin Drummond

Regents of Humanity from 1597 to 1708.

- 1597. John Ray
- 1606. Blase Colt

1611. Oliver Colt
 1611. Robert Burnet
 — Andrew Stevenson
 1623. Samuel Rutherford
 1626. Thomas Craufurd
 1630. John Armour
 1633. Alexander Gibson
 1636. James Wyseman
 1638. Robert Young
 1644. James Pillans
 1653. John Wishart
 1656. William Forbes
 1656. James M'Gowan
 1658. Hugh Smith
 1663. William Cumming
 1665. Andrew Ross
 1665. Thomas Bell
 1676. Gilbert MacMurdo
 1679. Alexander Cunningham
 1689. John Drummond

*Professors of Mathematics since
 1620.*

1620. Andrew Young
 1640. Thomas Craufurd
 1674. James Gregory
 1683. David Gregory
 1692. James Gregory
 1725. Colin M'Laurin
 1747. Matthew Stewart
 1775. Dugald Stewart
 1785. Adam Ferguson
 1785. John Playfair
 1805. John Leslie
 1819. William Wallace
 1838. Philip Kelland
 1879. GEORGE CHRYSTAL

Professors of Humanity since 1708.

1708. Laurence Dundas
 1728. Adam Watt
 1734. John Kerr
 1741. George Stuart
 1775. John Hill
 1806. Alexander Christison
 1820. James Pillans
 1863. William Young Sellar
 1891. H. CHESTER GOODHART

Professors of Greek since 1708.

1708. William Scott, *one of the
 Regents*
 1729. William Scott, *secundus*
 1730. Colin Drummond
 1738. Robert Law
 1741. Robert Hunter
 1772. Andrew Dalziel
 1805. George Dunbar
 1852. John Stuart Blackie
 1882. SAMUEL HENRY
 BUTCHER

*Professors of Logic and Metaphysics
 since 1708.*

1708. Colin Drummond, *one of
 the Regents*
 1730. John Stevenson
 1774. John Bruce
 1786. James Finlayson
 1808. David Ritchie
 1836. Sir Wm. Hamilton, Bart.
 1856. Alexander Campbell
 Fraser
 1891. ANDREW SETH

*Professors of Moral Philosophy
 since 1708.*

1708. William Law, *one of the
 Regents*
 1729. William Scott
 1734. John Pringle
 1745. William Cleghorn
 1754. James Balfour
 1764. Adam Ferguson
 1785. Dugald Stewart
 1810. Thomas Brown
 1820. John Wilson
 1853. P. C. M'Dougall
 1868. HENRY CALDERWOOD

*Professors of Natural Philosophy
 since 1708.*

1708. Robert Stewart, *one of the
 Regents*
 1742. John Stewart
 1759. Adam Ferguson

1764. James Russell
1774. John Robison
1805. John Playfair
1819. Sir John Leslie
1833. James David Forbes
1860. PETER GUTHRIE TAIT

Professors of Rhetoric and English Literature since 1762.

1762. Hugh Blair
1784. William Greenfield
1801. Andrew Brown
1835. George Moir
1840. William Spalding
1845. William Edmondstoune Aytoun
1865. DAVID MASSON

*Professors of History since 1719.
(See Faculty of Law.)*

Professors of Practical Astronomy since 1786.

1786. Robert Blair
1834. Thomas Henderson
1846. Charles Piazzi Smyth
1889. RALPH COPELAND

Professors of Agriculture since 1790.

1790. Andrew Coventry
1831. David Low
1854. John Wilson
1885. ROBERT WALLACE

Professors of the Theory of Music since 1839.

1839. John Thomson.
1841. Sir Henry Rowley Bishop

1844. Henry Hugh Pearson
1845. John Donaldson
1865. Sir Herbert Stanley Oakeley
1891. FREDERICK NIECKS.

Professor of Technology.

1855. George Wilson
[Chair abolished 1859.]

Professors of Sanskrit since 1862

1862. Theodor Aufrecht
1875. JULIUS EGGELING

Professors of Engineering.

1868. Fleeming Jenkin
1885. GEORGE FREDERICK ARMSTRONG

Professors of Geology.

1871. Archibald Geikie
1882. JAMES GEIKIE

*Professors of Commercial and Polit. Economy and Mercantile Law.
(See also Faculty of Law.)*

1871. W. B. Hodgson
1880. JOSEPH SHIELD NICHOLSON

Professor of Education.

1876. SIMON SOMERVILLE LAURIE

Professor of Fine Art.

1880. GERARD BALDWIN BROWN

Professor of Celtic Languages, &c.

1882. DONALD MACKINNON

FACULTY OF DIVINITY.

This Faculty, the second in chronological order, comprehends the four Chairs of Divinity, Hebrew and Oriental Languages, Divinity and Ecclesiastical History, and Biblical Criticism and Antiquities.

PROFESSORS IN THE FACULTY OF DIVINITY SINCE 1620.

Professors of Divinity since 1620.

- 1620. Andrew Ramsay
- 1627. Henry Charteris
- 1629. James Fairly
- 1630. John Sharpe
- 1648. Alexander Colvill
- 1649. Samuel Rutherford
- 1650. David Dickson
- 1662. Patrick Scougall
- 1664. William Keith
- 1675. Laurence Charteris
- 1682. John Menzies
- 1683. John Strachan
- 1690. George Campbell
- 1701. George Meldrum
- 1709. William Hamilton
- 1732. James Smith
- 1733. John Gowdie
- 1754. Robert Hamilton
- 1779. Andrew Hunter
- 1809. William Ritchie
- 1828. Thomas Chalmers
- 1844. John Lee
- 1859. Thomas J. Crawford
- 1876. ROBERT FLINT

Professors of Hebrew and Oriental Languages since 1642.

- 1642. Julius Conradus Otto
- 1656. Alexander Dickson
- 1679. Alexander Amedeus
- 1681. Alexander Douglas

- 1692. Patrick Sinclair
- 1694. Alexander Rule
- 1702. John Goodall
- 1719. James Crawford
- 1732. William Dawson
- 1751. James Robertson
- 1792. George Husband Baird
- 1793. William Moodie
- 1812. Alexander Murray
- 1813. Alexander Brunton
- 1848. David Liston
- 1880. DAVID LAIRD ADAMS

Professors of Divinity and Church History since 1695.

- 1702. John Cumming
- 1715. William Dunlop
- 1726. Matthew Crawford
- 1737. Patrick Cumming
- 1762. Robert Cumming
- 1788. Thomas Hardie
- 1799. Hugh Meiklejohn
- 1831. David Welsh
- 1844. James Robertson
- 1861. William Stevenson
- 1872. Robert Wallace
- 1876. MALCOLM CAMPBELL
TAYLOR.

Professors of Biblical Criticism and Biblical Antiquities since 1846.

- 1847. Robert Lee
- 1868. ARCHIBALD HAMILTON
CHARTERIS

FACULTY OF LAW.

To this Faculty belong seven Chairs, viz.:—Public Law, Civil or Roman Law, Constitutional Law and History (in conjunction with the Faculty of Arts), Law of Scotland, Medical Jurisprudence (in conjunction with the Faculty of Medicine), Conveyancing, and Commercial and Political Economy and Mercantile Law (in conjunction with the Faculty of Arts). Attendance on these classes is required by Candidates for Degrees in Law.

PROFESSORS IN THE FACULTY OF LAW SINCE 1707.

Professors of Public Law since 1707.

- 1707. Charles Areskine
- 1734. William Kirkpatrick
- 1735. George Abercrombie
- 1759. Robert Bruce
- 1764. James Balfour
- 1779. Allan Maconochie
- 1796. Robert Hamilton
- 1832. * * *
- 1862. James Lorimer
- 1890. Sir LUDOVIC GRANT, Bt.

Professors of Civil Law since 1710.

- 1710. James Craig
- 1732. Thomas Dundas
- 1745. Kenneth M'Kenzie
- 1755. Robert Dick
- 1792. John Wilde
- 1800. Alexander Irving
- 1827. Douglas Cheape
- 1842. A. Campbell Swinton
- 1862. James Muirhead
- 1889. HENRY GOUDY

Professors of History since 1719.

- 1719. Charles Mackie
- 1753. John Gordon
- 1754. William Wallace
- 1755. John Pringle
- 1780. Alex. Fraser Tytler
- 1801. William Fraser Tytler
- 1821. Sir William Hamilton
- 1837. George Skene
- 1842. James Frederick Ferrier
- 1846. Cosmo Innes
- 1874. Æneas J. G. Mackay
- 1881. JOHN KIRKPATRICK

Professors of the Law of Scotland since 1722.

- 1722. Alexander Bayne
- 1737. John Erskine
- 1765. William Wallace
- 1786. David Hume
- 1822. George Joseph Bell
- 1843. John Schank More
- 1861. George Ross
- 1864. George Moir
- 1865. Norman Macpherson
- 1888. JOHN RANKINE

Professors of Medical Jurisprudence since 1807.

- 1807. Andrew Duncan, *secundus*
- 1820. William Pulteney Alison
- 1822. Robert Christison
- 1832. Thomas Stewart Traill
- 1862. Sir DOUGLAS MACLAGAN

Professors of Conveyancing since 1825.

- 1825. Macvey Napier
- 1847. Allan Menzies
- 1856. A. Montgomerie Bell
- 1866. James Stuart Fraser Tytler
- 1892. JOHN PHILP WOOD

Professors of Commercial and Political Economy since 1871.¹

- 1871. W. B. Hodgson, and re-appointed 1878.
- 1880. JOSEPH SHIELD NICHOLSON, re-appointed 1887.

FACULTY OF MEDICINE.

The Faculty consists of the following twelve Chairs:—Botany, Institutes of Medicine, Practice of Physic, Anatomy, Chemistry, Midwifery, Natural History, Materia Medica, Clinical Surgery,

¹ This Chair was declared to be a Professorship in the Law as well as in the Arts Faculty by resolution of the Senatus Academicus in 1879.

Medical Jurisprudence (in conjunction with the Faculty of Law), Surgery, and General Pathology. The Professors of Practice of Physic, Materia Medica, and Pathology, are also Professors of Clinical Medicine. Some of these Chairs were instituted in the seventeenth century, but it does not appear that the Medical School and Faculty of the University was established earlier than the beginning of last century.

PROFESSORS IN THE FACULTY OF MEDICINE SINCE 1676.

Professors of Botany since 1676.

- 1676. James Sutherland
- 1706. Charles Preston
- 1712. George Preston

Professors of Medicine and Botany.

- 1738. Charles Alston
- 1761. John Hope
- 1786. Daniel Rutherford
- 1820. Robert Graham
- 1845. John Hutton Balfour
- 1879. Alexander Dickson
- 1888. ISAAC BAYLEY BALFOUR

Professors of Medicine in 1685.

- 1685. { Sir Robert Sibbald
- { James Halket
- { Archibald Pitcairne

Professors of Institutes of Medicine since 1724.

- 1724. William Porterfield
- 1726. { Andrew St Clair
- { John Rutherford
- 1747. Robert Whytt
- 1766. William Cullen
- 1773. Alex. Monro Drummond
- 1776. James Gregory
- 1789. Andrew Duncan
- 1819. Andrew Duncan, *secundus*
- 1821. William Pulteney Alison
- 1842. Allen Thomson
- 1848. John Hughes Bennett
- 1874. WILLIAM RUTHERFORD

Professors of Practice of Physic since 1724.

- 1724. William Porterfield
- 1726. { Andrew St Clair
- { John Rutherford
- 1747. Robert Whytt
- 1766. John Gregory
- 1773. William Cullen
- 1790. James Gregory
- 1821. James Home
- 1842. William Pulteney Alison
- 1855. Thomas Laycock
- 1876. THOMAS GRAINGER STEWART

Professors of Anatomy since 1705.

- 1705. Robert Elliot
- 1708. Adam Drummond
- 1716. John M'Gill
- 1720. Alexander Monro
- 1754. Alex. Monro, *secundus*
- 1798. Alexander Monro, *tertius*
- 1846. John Goodsir
- 1867. Sir WILLIAM TURNER

Professors of Chemistry and Medicine since 1713.

- 1713. James Crawford
- 1726. Andrew Plummer
- 1726. John Innes
- 1755. William Cullen
- 1766. Joseph Black
- 1795. Thomas Charles Hope

Professors of Chemistry.

- 1844. William Gregory
- 1858. Lyon Playfair
- 1869. ALEX. CRUM BROWN

Professors of Midwifery since 1726.

- 1726. Joseph Gibson
- 1739. Robert Smith
- 1756. Thomas Young
- 1780. Alexander Hamilton
- 1800. James Hamilton
- 1840. Sir J. Y. Simpson, Bart.
- 1870. ALEXANDER RUSSELL
SIMPSON

*Professors of Natural History
since 1767.*

- 1770. Robert Ramsay
- 1779. John Walker
- 1804. Robert Jameson
- 1854. Edward Forbes
- 1855. George James Allman
- 1870. Sir Wyv. T. C. Thomson
- 1882. JAMES COSSAR EWART

*Professors of Materia Medica
since 1768.*

- 1768. Francis Home
- 1798. James Home
- 1821. Andrew Duncan, *secundus*
- 1832. Sir Robt. Christison, Bart.
- 1877. THOMAS RICHARD
FRASER

*Professors of Clinical Surgery
since 1803.*

- 1803. James Russell
- 1833. James Syme
- 1869. Joseph Lister
- 1877. THOMAS ANNANDALE

*Professors of Military Surgery
since 1806.*

- 1806. John Thomson
- 1823. Sir George Ballingall
[Chair abolished.]

*Professors of Medical Jurisprudence
since 1807.*
[See Faculty of Law.]

Professors of Surgery since 1777.

- 1777. Alex. Monro, *secundus*
- 1798. Alexander Monro, *tertius*
- 1831. John William Turner
- 1836. Sir Charles Bell
- 1842. James Miller
- 1864. James Spence
- 1882. JOHN CHIENE

*Professors of General Pathology
since 1831.*

- 1831. John Thomson
- 1842. William Henderson
- 1869. W. R. Sanders
- 1881. WILLIAM SMITH GREEN-
FIELD

ASSISTANTS TO PROFESSORS.

In the Faculty of Arts there are Assistants to the Professors of Humanity, Greek, Mathematics, and Natural Philosophy, appointed under Ordinance No. 23. In the Faculty of Medicine there are Assistants to the Professors of Anatomy, Chemistry, Materia Medica, and Medical Jurisprudence, also appointed under that ordinance. The Professors of Logic, Moral Philosophy, Rhetoric and English Literature, Natural Philosophy, Engineering, Geology, Hebrew and Oriental Languages, Scots

Law, Civil Law, Conveyancing, Botany, Natural History, Institutes of Medicine, Practice of Physic, Surgery, Midwifery, Clinical Medicine, Clinical Surgery and Pathology, also have Assistants, provided by the University. The Assistants are appointed annually by the respective Professors, subject to the approval of the Senatus Academicus and of the University Court.

GENERAL COUNCIL OF THE UNIVERSITY.

The Chancellor, the Members of the University Court, the Professors, the Graduates, and all persons who previous to 2d August 1861 had, as Matriculated Students, given regular attendance on the course of study in the University for four complete Sessions, or for three complete Sessions in this, and a fourth in another Scottish University—the attendance for at least two of such sessions having been on the course of study in the Faculty of Arts, are entitled to be registered as Members of the General Council. The fee for registration is £1.

The Register for the current year contains 6885 Members, and is conclusive of the rights of persons to be Members up to 1st January 1893. By the Universities Elections Amendment (Scotland) Act all candidates for graduation are required to pay the Registration Fee before they can be allowed to appear for graduation.

Under the Universities (Scotland) Act of 1858, and the Commissioners' Ordinance No. 1, section 3, following thereon, the Council meets twice a-year—viz., on the *first Tuesday after the fourteenth day of April*, and on the *last Friday in October*, at three o'clock P.M., “to take into their consideration all questions affecting the well-being and prosperity of the University, and to make representations from time to time on such questions to the University Court, who shall consider the same, and return to the Council their deliverance thereon.” All proposed improvements in the internal arrangements of the University “shall be submitted to the University Council for their consideration.”

By the Universities (Scotland) Act, 1889, in addition to the

two statutory meetings above mentioned, the Council "may hold special meetings at the instance of the Chancellor, who shall convene such meetings on a requisition from a quorum of members, and the Council may adjourn any meeting, and may appoint Committees to investigate into and report upon any matter remitted to them or to carry out instructions given to them by the Council." The Universities Commissioners under the last-mentioned Act have fixed the quorum of the General Council at ten for every complete thousand or fraction of a thousand on the register of the members, but this provision does not apply to the statutory half-yearly meetings, or to adjourned meetings.

At the meetings of the General Council, in the absence of the Chancellor, Rector, and Principal, the Chancellor's Assessor, and in his absence the Rector's Assessor shall preside; and in the absence of all of the said officials, a Chairman shall be elected by the meeting, provided that no member of the Senatus shall preside at any meeting of the Council held for the purpose of electing an Assessor or Assessors. The Chairman shall have a deliberative and a casting vote, and in case of an equality of votes at the conclusion of a poll, the Chairman, or any one appointed by the University Court to act for him, shall have a casting vote.

The General Council of this University, and the General Council of the University of St Andrews jointly, return a Member of Parliament.

The *Chancellor* and *four of the Assessors* in the University Court are elected by the Council. The Chancellor holds office for life, and the Assessors for four years from the date of Election. Two of the Assessors retire biennially, but may be re-elected. In the event of a casual vacancy the person elected to fill such vacancy retires from office at the date when the person whom he succeeded would in the ordinary rotation have retired. No member of the Senatus Academicus of any University is entitled to vote or take part in the election of any Assessor of the General Council of that University. The next election of two

Assessors will take place at the statutory half-yearly meeting in *October 1893.*

Members of General Council are entitled to the use of the University Library on payment of an annual fee of 10s. 6d., or they may compound for such annual fee by one payment of £5, 5s.

STUDENTS' REPRESENTATIVE COUNCIL.

The Universities Commissioners are empowered to lay down regulations for the constitution and functions of a Students Representative Council in the University, and to frame regulations under which that Council shall be entitled to make representations to the University Court. The Rector may, before he appoints his Assessor, confer with the Students' Representative Council.

MATRICULATION.

University Matriculation consists in the signing of the *Sponsio Academica* by Students, thus entering their names in the General Roll of Students of the University, and in paying a fee of £1 for the academic year (1st October to 1st October), or a fee of 10s. for a Summer Session (1st May to 1st October). Matriculation is necessary before a Student can enter any of the Classes in the University, excepting certain additional courses after mentioned.

Matriculated Students may be members of any of the four Faculties. They have the privilege of electing the Rector of the University. In case of an equality of votes, the Chancellor, or failing him, the Principal, has the casting vote. Students also enjoy the right of admission to the University Library, and on certain days to the Museum of Natural History. Their names are preserved in the General Album, which is the legal register of attendance at the University.

All Candidates for Graduation in Law, in Medicine and Surgery, and in Science, not Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the beginning of each year of such attendance, enrol their names in a book to

be kept by the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having in respect of such payment, a right to the use of the Library of the University.

The following is the Sponsio Academica signed by students on matriculating—

QUOD FAUSTUM FELIXQUE SIT. A. D.—

Ego Universitatis Academicæ Edinburgensis Discipulus sincerè ac sanctè promitto quod et syngrophâ hac meâ in perpetuum testatum cupio, mihi ante omnia cordi ac curæ futurum veræ pietatis studium ; me etiam in assuetis academici curriculum studiis sedulum fore, ut adolescentem bene institutum decet ; et quamdiu in illo curriculo permansero praeceptoribus omnibus morigerum memet præstiturum, nec ullius dissidii aut tumultus clam palamve vel auctorem vel participem futurum, et per reliquam vitam Universitatem Academicam Edinburgensem ipsam grato et benevolo animo prosecuturum, idque omnibus officiis pro facultate mea et occasione data testaturum esse.

MATRICULATIONS (1st May 1891 to 1st May 1892).

FOR SUMMER SESSION :—

I. Faculty of Arts	25	
II. Faculty of Divinity	2	
III. Faculty of Law	9	
IV. Faculty of Medicine	53	
		89

FOR ACADEMIC YEAR :—

I. Faculty of Arts	913	
II. Faculty of Divinity	89	
III. Faculty of Law	474	
IV. Faculty of Medicine	1822	
		3298

Total Matriculations from May 1891 to May 1892 3387

The Senatus Academicus may, with the approval of the University Court, sanction the admission of persons who are not Matriculated Students of the University to any Course of Lectures in the University not included in the Course of Study for Graduation in any Faculty, on payment to the General Uni-

versity Fund of an Entrance Fee of Five Shillings in addition to the authorised Class Fee ; but such payment shall not entitle such person to any other University privilege. The Courses which at present may be attended under this Regulation are :—

Constitutional Law and History, short additional Courses on.

Engineering, short additional Courses on.

Fine Art, short additional Courses on.

Economic History, short Courses on (in connection with Political Economy).

Civil and Criminal Procedure.

Do.

Practical Class.

Mental Diseases.

Diseases of the Eye.

Clinical Instruction on Diseases of Children.

Comparative Embryology.

Forestry.

Agricultural Entomology.

Music (*for 1892-93 only*).

Other Courses may from time to time be sanctioned under this Regulation.

Students are subject to the disciplinary jurisdiction of the Professors and of the Senatus Academicus. Among offences liable to be visited with severe academic penalties may be mentioned riotous or disorderly conduct within or without the University Buildings, copying at examinations, and mutilating or disfiguring books belonging to the University Library.

UNIVERSITY EXAMINERS,

FOR DEGREES.¹

I. *Faculty of Arts*.—The Examiners for the Degree in Arts are the seven Professors whose classes are embraced in the Curriculum ; and, in addition, three persons (Members of a Scottish University Council, but not Professors or Assistant Professors in any Scottish University) appointed (each for three years) by the University Court, in whose appointment regard must be had to their eminence in Classical Literature, Mental

¹ For Regulations as to time of appointment and Substitutes for absent Examiners, see p. 35. For names of former Examiners, see Historical Appendix to List of University Graduates, published in 1889, pp. 111 and 112. For names of the present Examiners, see pp. 5 and 6 hereof.

Philosophy, and Mathematical Science, respectively. No Examiner can be re-appointed till he has ceased to hold office for a year. Candidates for Honours in Natural Science are examined by the Professors of Natural History, Chemistry, Botany, and Geology.

II. *Faculty of Divinity*.—The Examiners for the Degree of Bachelor in Divinity are the four Professors of the Faculty, together with two Examiners appointed by the University Court for the term of three years.

III. *Faculty of Law*.—The Examiners for the Degrees of Bachelor of Laws (LL.B.) and Bachelor of Law (B.L.) are the seven Professors of the Faculty, two Examiners selected by the University Court from those who have graduated in Laws and an Examiner in French and German.

IV. *Faculty of Medicine*.—The Examiners for Degrees in Medicine are the Professors in the Faculty, with the addition of twelve Examiners appointed annually by the University Court. The Preliminary Examination of Candidates for Medical Degrees is conducted by the Examiners in Arts, and an Examiner in French and German, with some of the Medical Examiners.

V. *Degrees in Science*.—The Examiners for Degrees in Science are :—*Preliminary Examination*—The Examiners for Degrees in Arts, and an Examiner in French and German. *Mental Science*—The Professors of Logic and Metaphysics, and of Moral Philosophy. *Philology*—The Professors of Humanity, Greek, Hebrew and Oriental Languages, and of Sanskrit and Comparative Philology. *Physical and Natural Science*—The Professors of Mathematics, Natural Philosophy, Chemistry, Botany, Natural History, Physiology, and Geology, and the additional Examiners in Mathematics, Chemistry, Botany, and Natural History. *Engineering*—The Professors of Mathematics, Natural Philosophy, Chemistry, and Engineering, and the additional Examiners in Mathematics, Chemistry, and in Engineering.

Public Health—The Professors of Chemistry, Natural Philosophy, Practice of Physic, Materia Medica, Medical Jurisprudence, and Engineering, and the additional Examiners in Mathematics, Chemistry, and Medical Jurisprudence. *Agriculture*—The Professors of Agriculture, Chemistry, Botany, Natural History, Geology, Political Economy, and Engineering, and the additional Examiners in Chemistry, Botany, Natural History, Agriculture, Veterinary Hygiene, and Chemistry as applied to Agriculture. *Schoolmaster's Diploma*—The Examiners for the Schoolmaster's Diploma are the Professor of Education and an Examiner appointed by the University Court. *Title of Literate in Arts*—The Professors of the Subjects, and the Examiners for Degrees in Arts.

ANNUAL CEREMONIALS FOR GRADUATION.

The relative precedence of each Faculty is as follows :—1. Divinity ; 2. Law ; 3. Medicine ; 4. Arts. The Deans take precedence in their respective Faculties followed by the Members of their Faculties in the order of the dates of their Commissions.

The Public Ceremonial of Graduation in Divinity, Law, Arts, and Science is held annually in April.

Degrees in Law, Medicine, and Science are publicly conferred on the first of August in each year.

Graduates must appear on these occasions in the Academic Costume proper to their respective Degrees.

ACADEMIC COSTUME.

Chancellor.—Robe of Black Brocaded Satin, trimmed with Gold Lace, and with Gold Frogs down fronts and on sleeves. Black Silk Velvet Trencher, with Gold Button and Tassel.

Vice-Chancellor.—Robe and Trencher same as Chancellor's, but trimmed with Silver in place of Gold.

Rector.—Black Silk Gown, with Crimson Silk Velvet sleeves. The gown is trimmed round the collar and down the front edges with Broad Gold Lace, and the sleeves round bottom with a narrower Gold Lace. Black Silk Velvet Trencher, with Gold Button and Tassel.

Principal.—Mauve Corded Silk Robe trimmed with Velvet to match. Black Silk Velvet Trencher, with Gold Button and Tassel.

Members of University Court.—Black Silk Robe, open sleeve, with Gold Frog on each sleeve.

With all of the above, Hoods appropriate to the Degree are worn.

The ordinary form of Gowns worn by Graduates of the University is the same in all the Faculties—viz., black silk or stuff, with long sleeves. The distinctive part of the costume is in the *Hood* appropriated to each Faculty. These Hoods are as follow :

LL.D.—Black *cloth*, lined with *blue* silk.

LL.B.—Black *silk*, lined with *blue* silk, bordered with white fur.

B.L.—Black *silk*, edged with *blue* silk three inches broad, trimmed with white fur.

D.D.—Black *cloth*, lined with *purple* silk.

B.D.—Black *silk*, lined with *purple* silk, bordered with white fur.

M.D.—Black *cloth*, with appended cape, lined and faced with *crimson* silk.

M.B. and C.M.—Black *silk*, lined with *crimson* silk, bordered with white fur.

Sc.D.—Black *cloth*, lined with *green* silk.

Sc.B.—Black *silk*, lined with *green* silk, bordered with white fur.

M.A.—Black *silk*, lined with *white* silk.

The full Academic Dress for Doctors of Law, Medicine, and Science, is Gown of superfine Scarlet Cloth, loose sleeves, the cape and facings down the front covered, and the sleeves lined, with rich silk of the colour proper to the Degree. Birretum of black silk velvet.

REGULATIONS OF UNIVERSITY COURT.

I.—ABSENCE OF PROFESSORS.

24th Jan. 1887.

1. When any Professor shall be prevented from teaching his Class for more than three successive days, an arrangement shall be made for his Class being taught in his absence ; and such arrangement shall be intimated to the Dean of his Faculty.

2. When any Professor has reason to expect that the demands of his Profession may involve absence from duty for more than four days in all in the course of a Session, an arrangement similar to that in Regulation 1 shall be made and intimated to the Dean of his Faculty.

3. No arrangement for teaching a Class in absence of the Professor shall continue longer than one week without the sanction of the Senatus Academicus ; or, if there be no sufficiently early meeting of the Senatus, without the *interim* sanction of the Principal and Deans Committee.

4. When any Professor shall contemplate an absence from duty of

more than one week, it shall be necessary for him to obtain the sanction of the Senatus for such absence, and for the arrangements for teaching his Class; and if his contemplated absence extend to four weeks or upwards, the sanction of the Senatus shall require the confirmation of the University Court.

5. No Professor shall employ any one other than a Colleague or University Assistant to teach his Class for him, without obtaining the sanction of his Faculty; and such sanction shall be communicated to the Senatus at its first meeting thereafter.

6. The Statement of the arrangements for teaching a Class in the absence of the Professor, submitted to the authorities of the University, shall specify the remuneration proposed to be given to the Professor's Substitute.

II.—ABSENCE OF EXAMINERS.

12th June 1876.

1. Any University Examiner who finds himself prevented from being present at any Examination at which it is his duty to act, shall intimate this to the Dean or other Chairman of his Examining Board, who, on receiving such intimation, or otherwise becoming aware of the absence of the Examiner, shall, if possible, appoint a properly qualified Substitute to act for such Examiner.

2. In every case in which a person is appointed to act as Substitute for a University Examiner, and in which his Faculty, or Examining Committee, shall consider it necessary that the Substitute shall receive remuneration, the rate of remuneration to be paid by the Examiner (whether a Professor or Additional Examiner) to his Substitute shall be fixed by the Faculty, or Examining Committee, and shall be based upon the amount of the Fees payable to the Additional Examiners attached to the Faculty or Examining Committee.

3. All absences of University Examiners, their duration and cause, and the relative arrangements made, shall be immediately reported for approval to the Senatus Academicus by the Chairman of the Board to which the absent Examiner is attached; and a similar Report shall in every case of the absence of a University Examiner be made by the Senatus Academicus to the University Court; provided always that such arrangements shall receive immediate effect when circumstances do not permit the previous approval of the Senatus Academicus to be obtained.

4. In every case in which a Professor shall apply for leave of absence from his duties generally, provision shall be made, under the existing Regulations regarding leave of absence to Professors, for the performance of his duties as Examiner, as well as for the performance of his duties as Teacher; and provision shall be made for the remuneration of his Substitute in both capacities.

III.—APPLICATIONS FOR ADDITIONAL (OR NON-PROFESSORIAL)
EXAMINERSHIPS IN THE UNIVERSITY.

17th February 1890.

1. Applicants should lodge sixteen copies of their applications (one of which should be signed), and sixteen copies of any testimonials they may desire to present, with the Secretary of the Court, not later than one week before the day fixed for making appointments in each case.

2. Applicants who send in testimonials must not send more than four for any one appointment.

3. The days for making appointments to the Additional Examinerships falling vacant in the ordinary course are :—In Arts, on the second Monday of July, for the period commencing on 1st October following ; in Divinity, Medicine, Law, and the Civil Engineering and Agriculture Department of Science, on the second Monday of January in each year, for the period commencing on the 1st of that month ; for Schoolmaster's Diploma, on the third Monday of November.

4. The appointments in Divinity, Arts, Law, the C. E. and Agriculture Departments of Science, and for the Schoolmaster's Diploma, are for three years. The appointments in Medicine are for one year, and the persons appointed may hold office by annual reappointment for a period of five years, but not longer, except under special circumstances.

5. Persons may be appointed to examine in two of the thirteen Subjects of the Examinations for Graduation in Medicine, but not more, and not in more than one Subject in any one Division of the Examinations.

6. Every applicant for an appointment in Divinity must hold the degree of B.D. from a Scottish University.

7. Every applicant for an appointment in Arts must be a member of the General Council of a Scottish University.

IV.—OPENING OF NEW CLASSES.

6th May 1868.

No class in addition to those existing in the University shall at any time be opened,—whether for the purpose of dividing the course on a subject necessary for graduation, or for teaching a class not requisite for graduation,—without the approval of the Senatus and the sanction of the University Court.

V.—RECOGNITION OF EXTRA-ACADEMICAL TEACHERS.

17th Feb. 1890.

1. Every applicant for recognition shall furnish for the information of the Authorities of the University :—

- (1.) A Statement of his Registered Qualification or Qualifications, and of the name of the Office, or Appointment (if any) which he holds, as a Teacher of the Subject in which he requests recognition.

- (2.) A Syllabus of his Course of Lectures; or, in the case of a Practical Class, information of a similar kind.
- (3.) A Statement of the number of Lectures, and of the number of Written or Oral Examinations in the Course; or, in the case of a Practical Class, information of a similar kind.
- (4.) A Short description of his Accommodation for a Class; and of the Apparatus, Illustrative Specimens, Diagrams, and other appliances, at his disposal for teaching the Subject in which he desires recognition.
- (5.) A Statement of his opportunities of studying the Subject, and of the length of time devoted thereto.
- (6.) A Statement of the experience he has had in teaching the Subject.
- (7.) A Note of the Titles of his published Contributions to the Science of the Subject.
- (8.) A Statement as to whether his Course or Courses of Instruction have been already recognised by any University or other examining body, and, if so, what means were adopted for ascertaining his qualifications for teaching.

2. In the case of every Applicant for recognition residing in Edinburgh or its neighbourhood, an inspection shall be made of his teaching Appliances and Accommodation for teaching.

3. Every recognised Extra-Academical Teacher shall annually furnish the University with the information regarding his Course or Courses which is required from the University Professors as to (1.) The number of Students attending the recognised Course or Courses of Instruction; (2.) The number of meetings for ordinary Class Work in the Session, and in each week thereof, excluding meetings which fall under the next head; (3.) The number of Special Written Examinations; (4.) The system of conducting the ordinary Class Work, and the number of meetings devoted to each kind of work.

4. The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the number of Lectures, or of Meetings for Practical Instruction, in the Course; the number of occasions on which attendance was ascertained; and the number of those occasions on which the Student was present. The Certificate should also state the general scope of the Course; and, in particular, in the case of Chemistry, that the Course included Organic as well as Inorganic Chemistry; in the case of Midwifery, that it included the diseases of Women and Children; and, in the case of Practical Materia Medica, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

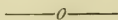
5. In the event of an Extra-Academical Teacher removing from the premises or building occupied by him for teaching a recognised Course, such Teacher shall be required to intimate his removal to the University Court, in order that the Court may have an opportunity of

considering whether the accommodation in the building to which he has removed is adapted for the purpose of teaching the Subject in which he is recognised.

6. When application is made for the recognition of a Course taught by two or more Teachers in conjunction, information shall be given of the share to be taken by each Teacher in such conjoined Course ; and the recognition of such conjoined Courses, and of each of the persons recognised as Teachers of a conjoined Course shall, *ipso facto*, terminate should one or more of the Teachers cease to conduct the Course, or should any material change be made in the share of each Teacher in the teaching of the conjoined Course.

7. The recognition of any Teacher who fails to furnish the information called for in Section 3, or an explanation relative to such failure ; or who has ceased for the period of two consecutive Sessions to teach the subject on which he is recognised shall, *ipso facto*, terminate.

University Buildings.



THE University Buildings at present consist of three distinct portions: (1) The College, or University (Old) Building, with Dome, in South Bridge Street; (2) The University New Buildings (School of Medicine), Teviot Row; and (3) The Music Class Room, Park Place.

I.—THE UNIVERSITY (OLD) BUILDING.

The University (Old) Building, which covers the site of “Kirk o’ Field,” the scene of the murder of Darnley, contains the University Library and Reading Rooms; the Class Rooms of the Faculties of Arts, Divinity, and Law, and the Natural History Class Room; the Theological Library and Reading Room; the Examination Hall; the Physical, and the Geological and Petrological Laboratories; the Fulton Engineering Laboratory; the Physical, Geological, Fine Art, and Natural History Museums; the Senate Hall, University Court Room, and the Offices of the Senatus, of the University Court, and of the Students’ Representative Council.

The work of teaching began in 1583, but until the latter part of the eighteenth century, the professors and students of the University had been very imperfectly housed. In a Memorial, dated 1768, Principal Robertson complains that the buildings, “poor in themselves, seem not to have been carried on according to any regular plan, such as takes place in other academical structures which have been erected on more opulent foundations; and hence the whole fabric has a mean, irregular, and contemptible appearance.” At this time the number of students was estimated to be between six and seven hundred, and the number of professors was twenty-one.

Twenty years later this complaint was repeated by a writer in the "*Scots Magazine*," who notices that "in 1788 the buildings of the University are in the same ruinous condition that they were in in 1768, and the most celebrated University at present in Europe is the worst accommodated." A scheme for rebuilding, which had been often discussed, was now taken seriously in hand by the Town Council, encouraged by promise of liberal aid from Government. A plan was obtained from Robert Adam, then at the height of his reputation, and the foundation stone of "the New College of Edinburgh" was laid with considerable pomp on November 16, 1789.

The original plans of Robert Adam, preserved in the Soane Museum in London, divide the space now occupied by the College buildings into two quadrangles, a smaller to the east, entered as at present from South Bridge Street, and a larger beyond it to the west, a block of academic buildings lying between. This arrangement was doubtless intended to obviate the difficulties caused by the rapid rise of the ground from north-east to south-west. Round the two courts thus formed there were not only to be Class Rooms, Museums, and a Library, but also houses for the Principal and Professors. The western side of the larger court was to be occupied by a large Graduation Hall and Chapel. Corridors and lobbies were to surround the great quadrangle, affording covered communication between the different class rooms. The buildings were begun at different points, chiefly on the eastern and northern sides, but had not proceeded far towards completion when the death of the architect in 1792, and soon afterwards a failure of funds, caused a cessation of the work. The fabric, partly old and partly new, remained in a very unsatisfactory state till 1815, when a Government Commission was appointed to collect funds and to carry out the undertaking, though in a somewhat modified form. An advertisement was then issued, inviting plans "for finishing the College of Edinburgh, on a reduced scale, leaving out the south front, and the cross building, which formed the small court in the original plan,—regard being always had to the part already executed, and to the preservation of the architecture of Mr

Adam, as far as practicable." Out of nine sets of plans sent in, those of William Henry Playfair were finally selected, and under his superintendence the work progressed rapidly till its practical completion in 1828, by which date the New Buildings had cost in round figures some £161,000.

In the buildings as they appear at present, the general character of the whole design is due to Robert Adam. Some portions were actually erected by him, or completed after his death in accordance with his drawings. In other parts some modification of Adam's plans and elevations was necessary, while the designs of a third portion had to be furnished anew by Mr Playfair, who was careful in both these cases to provide that, in his own words, "the exterior of the buildings would be executed as nearly similar as possible to Mr Adam's design." The eastern exterior front, a very fine specimen of monumental architecture, with its monolithic columns 22 feet in height, was erected by Adam, and it may be noted that in the original drawings for this portion in the Soane Museum a certain amount of sculpture is introduced, which would have greatly enhanced the effect had it been added to the façade. Thus, statues were to have been placed upon the balustrade of the shallow balcony above the portico, one over each of the monolithic columns. Erected, too, by Adam, was the north-west corner of the great court, of which the circular Loggie form an admired feature, while he also carried out a considerable portion of the north front to what is now Chambers Street, and commenced the western block. The principal modification introduced by Playfair was the throwing of the two courts into one, which involved a reconsideration of the north and south interior elevations. Here Adam's plan was departed from, and the present elevations on these two sides are due to his successor. Playfair erected the elevations of the western block after Adam's designs with some very slight improvements ; but the interior treatment of the block, which he fitted up for the Natural History Museums, is his own, and the "Upper Museum," now the Natural History Laboratory, is a good specimen of his style. The "circular corners" which Adam had designed for his

great court were retained by Playfair for his single quadrangle, but in order to fit them on at the eastern end, a new screen of masonry was erected on the inner front of the eastern portico. On the exterior, the north front is Adam's, and its comparative plainness is due to the fact that at the time only a narrow lane bounded the College on the side where now runs the broad thoroughfare of Chambers Street. For the south exterior front Adam had given a handsome and ornate design, which was afterwards simplified by Playfair, but is still superior in treatment to the corresponding elevation to the north.

The difficulty of the levels in the quadrangle was overcome by Playfair in a most satisfactory manner. He designed a terrace surrounding the court, under which on the northern and eastern sides is a basement story, while access is gained from the area below by flights of steps. The whole provides a very suitable architectural base for the noble buildings surrounding the quadrangle.

The interior arrangements were considerably modified by Playfair, and his great achievement is the Library Hall, a fine gallery measuring 185 feet by 54 feet, with an arched ceiling enriched with cassettes, the effect of which is, however, marred by insufficient lighting. For all the ornamental details in the Library Hall and the Natural History Museum, Playfair furnished careful full size drawings.

The general effect of the buildings is simple and dignified, and their character thoroughly Academic. The material is mainly Craighleith stone, and the detail carving is well worked out. The single quadrangle, measuring 242 feet 6 inches from east to west, by 134 feet from north to south, has a very spacious effect, and is a great improvement on the original plan of 1789, though, as before remarked, the essentials of the design must be regarded as due to Adam. No finer specimens of the neo-classic style could be found than the interior elevations of the Quadrangle, especially on the west, or the eastern front to South Bridge Street.

THE DOME.

The original design of Robert Adam provided for a Dome over the eastern portal. The form he had sketched out was not, however, a pleasing one, and no steps were taken to carry out this feature until 1883, when funds came into the possession of the University, bequeathed for the purpose of erecting a Dome, by Robert Cox, Esq., W.S. It was then determined to carry out the Dome on a new design prepared by R. Rowand Anderson, Esq., LL.D., Architect of the University New Buildings (School of Medicine). The present Dome, though in a less purely classical style than the Adam-Playfair building, is in itself a pleasing and effective structure, and a welcome addition to the architectural features of the city. An admirable finial to this fine architectural work is formed by a vigorous and athletic figure of Youth, bearing the torch of Knowledge, executed in bronze by John Hutchison, Esq., R.S.A. The Fine Art Museum is accommodated in the Dome.

II.—THE UNIVERSITY NEW BUILDINGS.

(SCHOOL OF MEDICINE.)

In 1869 the number of students had risen to more than fifteen hundred, and that of the Professors to thirty-three, while there were seventeen Class Rooms only for their accommodation. A Committee was therefore formed in 1873, and an appeal was made to the public for subscriptions for the purpose of purchasing a site for and erecting complete Class Rooms, Theatres, Laboratories, and Museums for the Faculty of Medicine, with the latest scientific improvements; for reorganising the Class Rooms of the College for the Faculties of Arts, Divinity, and Law; for providing increased and more convenient accommodation for the University Library; for erecting a University Hall for conferring degrees, for holding examinations and other public and academic ceremonials; and for improving to some extent the north front of the College building.

This appeal to the public resulted in subscriptions being

received to the amount of £148,548, 2s. 5d., which, with a grant of £80,000 received from Government, and interest, rents, and value received for old material, amounted to the sum of £244,587, 4s. 8d.

These buildings (the University New Buildings, begun in 1878) were partly opened for teaching purposes in October 1880, and having been completed, were transferred by the Committee to the University in October 1888. They are situated on an irregularly shaped site formerly covered by Teviot Row, Park Street, and Park Place, and were designed by R. Rowand Anderson, Esq., LL.D., Architect, and completed under his supervision.

In them are placed the Lecture Rooms, &c., of the Faculty of Medicine (excepting those of Botany and Natural History), the Museums of Practice of Physic, Anatomy, Chemistry, Obstetrics, Materia Medica, and Surgery; a Students' Reading Room, Students' Common Room, Faculty of Medicine Reception and Reading Room, and Office of the Faculty.

The style of architecture adopted by Dr Anderson is Italian of the Cinque Cento period. This style, developed in the end of the fifteenth and beginning of the sixteenth centuries, may be regarded as intermediate between the Gothic and the stiff Palladian work, which aims at a mere manipulation of the five orders; and it naturally commends itself on account of its plasticity and adaptability to varied internal arrangements. The main frontage presents, as its central feature, a slightly projecting elevation, pierced by the archway which forms the principal entrance. Over the arch is an ornate window, flanked by pilasters, between which are niches for statuary; and the whole is surmounted by a bold semi-circular pediment, intended to be occupied with a group of sculpture. The façade is three storeys in height except in the projecting west wing, which has an additional floor. On the ground floor the windows are square, and are surrounded with simply moulded architraves. Above these runs a well-marked string course ornamented with dentils. The first floor windows are round-headed and furnished with architraves, their arches showing boldly in the masonry of the

wall. Next comes a broad frieze, relieved at intervals with circular panels, in which carved work will be placed. Over this the string course is repeated ; and the upper floor windows are separated by pilasters, each being divided by a shaft which supports a circular tracery in the window head. The wall is finished at the top with architrave, frieze, and cornice, and crowned with a low-pitched roof, covered with red tiles. The external features and their relative positions have been influenced by the internal arrangements of the building.

THE M'EWAN HALL.

The building which completes the group of the University New Buildings, or School of Medicine, is the M'Ewan Hall, the munificent gift of William M'Ewan, Esq., M.P., Edinburgh. Dr R. Rowand Anderson was also the architect of this building, which stands on the ground formerly occupied by Park Street. The Greek Theatre forms the basis of the design. The internal diameter of the semicircle is 134 ft., and the dimension the other way, including the platform recess, is 107 ft. ; and the height from floor to ring of centre light is 90 ft. On the north-west corner, and connecting the Hall with the present buildings, is placed the Campanile Tower, which is 32 ft. square at the base, and rises to the height of 275 ft. The tower will, in the meantime, only be carried up to the height of the other buildings, but it is hoped that at no distant date this noble part of the design may be completed. At the south-west corner is placed the entrance to the principal staircase, and on the outer circumference of the circle are placed two double stairs for access to the galleries. No fewer than seven entrances to the Hall are provided, so that easy access and speedy exit may be secured. One of the chief of these entrances is in the base of the tower. The Hall is capable of holding 3000 people, and in designing it the architect has had in view the special object which it is intended to serve. In it Degrees will be conferred, and Examinations and all public Academic Ceremonials and Concerts connected with the University will be held. A large platform and

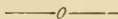
ample floor space and gallery accommodation have accordingly been provided. Provision has also been made for the accommodation of a great organ and an orchestra of over 300 performers. The space is apportioned as follows :—A flat area, to be occupied by the Graduands on ceremonial days ; a raised amphitheatre of seats following the sweep of the semicircle, and two galleries, also semicircular in form, rising one above the other. Immediately at the back of the amphitheatre is a vaulted fire-proof corridor, 12 ft. wide, extending round the half circle from the north-west to the south-west entrance. Above it is the first gallery. The platform is placed on the straight side of the Hall, and is of ample dimensions, with appropriate seats for the Chancellor, the Rector, the Principal, the University Court, the Senatus, the Curators, &c. The system of construction is really that of the double wall. The inner wall which carries the roof is opened up with pillars and arches from the level of the first gallery, thrusts being transmitted by flying buttresses to the outer wall. The roof is domical in form, is deeply panelled, and pierced at the base with circular lights, and has in the centre a skylight 25 feet in diameter. It will be constructed entirely of steel. From the floor to the roof the Hall will be 90 feet in height, and with its imposing dimensions and tiers of stone pillars and arches, it will be one of the most striking and handsome Halls in the kingdom. The external elevation will conform to the early Italian of the rest of the buildings. The great circle of the Hall is divided vertically by powerful buttresses, while horizontally the lines correspond with those of the west façade. The elevation is divided into three stages ; the first is panelled with circular lights, the second is a blank wall, while the third stage is arcaded—there being three arches between each buttress. On the two principal stages the buttresses have niches for figures. The wall is surmounted by a cornice and balustraded parapet, and above this appears the clerestory, which is carried on the inner circle, while over all rises the domical roof. The Hall was begun in 1889, and will probably be completed in 1893.

III.—REID SCHOOL OF MUSIC.

The School of Music, situated immediately to the south-east of the University New Buildings, was built in the year 1858, from the designs of the late David Cousin. It contains the Music Class Room, with an organ of four manuals and sixty-six stops, enclosed in a handsome carved oak case; and a Museum containing an interesting collection of acoustic and antique musical instruments.

The architecture of the building is studied from the best and purest examples of the Italian Renaissance of the early part of the sixteenth century.

University Library.¹



THE Library Committee consists of not more than seven members of the University or others, not being members of the Senatus Academicus, appointed by the University Court, and of such number of members appointed by the Senatus Academicus as shall be double the number appointed by the Court. The said Committee shall be charged with the immediate superintendence of the University Library, and of the contents thereof, and of any libraries acquired, or to be acquired, for the use of the University or of any class therein. The members of the said Committee, in the proportions aforesaid, are appointed by the University Court and Senatus Academicus respectively at their first meeting after the commencement of the Winter Session in each year.

LIBRARY COMMITTEE, 1891-92.

The Principal, Sir WILLIAM MUIR, Bart., }
Sir THOMAS CLARK, Bart. (c)², } *Joint-Conveners.*

Professor EGGEING, *Vice-Conveners.*

Professor Crum Brown ; James Taylor Brown (c)² ; Professor Charteris ; Professor Chrystal ; James Avon Clyde, LL.B. (c)² ; James Colston (c)² ; Professor Copeland ; Ralph Dundas (c)² ; Professor Cossar Ewart ; Professor Flint ; Professor Geikie ; Professor Goodhart ; Professor Goudie ; Aeneas J. G. Mackay, LL.D. (c)² ; J. Balfour Paul (c)² ; Professor Rutherford ; Professor Simpson ; Professor Tait.

In 1580 Mr Clement Littil or Little, left his books to "Edinbvrgh and Kirk of God thair to reman." This collection of

¹ The names of the present Librarian and of the Assistant Librarians are given at p. 7. The names of the Librarians from 1635 to the present time will be found in previous Calendars, and also in the Historical Appendix to List of Graduates of the University published in 1889, page 113.

² Appointed by the University Court.

about 300 volumes, chiefly theological (see list in Miscellany of the Maitland Club, vol i., 1834), was a few years afterwards transferred by the Town Council to the University, and thus became the nucleus of the University Library, which was gradually augmented by donations from Citizens of Edinburgh and from alumni of the University, and by annual contributions of Students when they took the Degree of Master of Arts.

The celebrated Poet, Drummond of Hawthornden, bequeathed his library to the University in 1627; and the gift is valuable, both from the eminence of the donor's name, and from the rare specimens of early literature with which the collection is enriched (see *Auctarium Bibliothecæ Edinburgensæ*, 1627).

Among donors may be specified, for the extent and value of their benefactions, Principal Adamson, Dr Robert Johnston, a physician in London; the Rev. James Nairne of Wemyss, in Fife; Dr John Stevenson, Professor of Logic and Metaphysics in the University; and Dr William Thomson, Professor of Anatomy in the University of Oxford. In 1872, the Library received a valuable donation from J. O. Halliwell, the eminent Shakespearean critic, of works relating to Shakespeare, collected at great cost. In 1875 a large collection of Persian and Arabic MSS. was presented by Mr J. B. Baillie of Leys. In 1879 the bequest of an extensive collection of MSS. was received from the executors of David Laing, LL.D. In 1880 the collection of works on Economic Science formed by Professor Hodgson were presented to the Library by Mrs Hodgson. In 1882 a valuable collection of works on Sanskrit Literature was presented by the family of Dr John Muir. In 1886 Mr Thomas Stratton bequeathed to the Library 110 works bearing on the study of Celtic; and in 1889 William Mackinnon, Esq. of Balmakill, having purchased the library of the late Dr Cameron of Brodick, an eminent Celtic scholar, at a cost of £600, placed the books at the disposal of the University. This same year saw the bequest of a collection of MS. Shakespeariana by Mr Halliwell-Phillipps; and the presentation, by his widow, of a number of volumes from the library of the late Professor Wilson.

The University Library contains about 180,000 printed

volumes, and about 3000 volumes of MSS., many of which are of great interest and value.

The University possesses a number of valuable pictures and busts, which are kept in the Library and the Senate Hall.

The Library Hall, and the suite of rooms connected with it, occupy the south side of the College quadrangle.

The Library is open for the purpose of giving out Books to Readers, either on loan or for reference, every lawful day during the Winter Session, from Ten to Four o'clock, except on Saturdays, when it is closed at One o'clock, and during the Summer Session and Autumn from Ten to Three, and on Saturdays from Ten to Twelve, except as aftermentioned. During the month of August, and during the Christmas vacation and the week in which the Spring Holiday occurs, the Library (not the Reading-Rooms) is open from Ten to One, except on Saturdays and holidays. The holidays are—the Queen's Birthday, Christmas Day, New Year's Day, Good Friday, and the Edinburgh Spring and Autumn Holidays. The Students' Reading-Room is also open during the Winter Session every evening (Saturdays excepted), from Eight to Ten P.M.

For Regulations regarding the READING ROOMS (see pages 58 and 60).

The following Regulations, enacted in 1862, relate to the general management of the Library :—

I. The Librarian has the ordinary Management of the Library, subject to the superintendence of the Library Committee.

II. The Librarian and the Assistant Librarians are appointed by the Senatus Academicus, who have the power of suspending or dismissing them, subject to an appeal to the University Court.

III. All books ordered for the Library are sent direct to the Librarian, and forthwith entered by him in the Catalogue, and noted with distinguishing marks; and no person is allowed to use or borrow any book until it has been entered in the Catalogue, and noted.

IV. The Senatus Academicus, or the Library Committee,

have power, from time to time, to make provision for the manner in which the ordinary business of the Library, in regard to borrowing and consulting books, is conducted, by establishing a regular and authentic record of borrowing and returning books on such a system as secures their due return and preservation.

V. The Librarian is required from time to time to prepare a list, to be submitted to, and adjusted and approved by, the Senatus, and when so adjusted and approved, to be kept by the Librarian, of such books, manuscripts, and other works, as ought not to be lent out of the Library, and which shall not be lent out on any terms; and the Senatus make regulations for allowing access to such works for consultation.

VI. The Librarian is required from time to time to prepare a list, to be submitted to, and adjusted and approved by, the Senatus, and when so adjusted and approved, to be kept by the Librarian, of such works as ought not to be lent out of the Library, except upon special application, and by special permission of the Library Committee; and the Senatus, from time to time, make general regulations as to the conditions under which such works may be borrowed; and in addition to such general regulations, the Library Committee may, in each individual case of borrowing such works, impose such special conditions as they may think necessary or expedient: Provided always, that every such special permission, and all such additional conditions imposed by the Library Committee, are entered in the Minute-book of the Committee.

VII. A general Inspection of the Library of the University, and of the record kept, as above provided by Section IV., of the borrowing and returning of books, takes place *annually in the second week of October*.

VIII. During the period of the annual Inspection the Library is closed, and all works whatever, and by whomsoever borrowed, must be returned to the Library before the commencement of

such period, under a penalty, previously fixed and publicly notified by the Senatus, of not less than one shilling a volume ; and in the event of any volume not being returned before the expiration of one week after the last day of the inspection, the fine is repeated weekly until such volume is returned, or until a copy of the work of the same edition, and of equal value is, at the expense of the borrower, placed in the Library in its stead : Provided always, that the amount of the fine in the case of works borrowed by special permission as aforesaid, may be fixed either by general regulation of the Senatus, or by special condition imposed by the Library Committee in any individual case.

IX. The use of the Library by *persons not being Students of the University* is subject to the following regulations :—

1. Each Member of the Senatus Academicus is entitled to have in his possession, at one time, twenty-five volumes but not more.
2. Each Member of the General Council is, in each year in which he shall have paid a subscription to the Library of ten shillings and sixpence, entitled to have in his possession at one time four volumes, but not more : Provided always, that a payment, instead of such yearly subscription, of a composition of five guineas entitles a person to the like privilege for life. In regard to the use of the Library by Members of the General Council, the year is held to date from the *fifteenth day of October*.
- 3.¹ In consideration of the Annual payment of five pounds by the Royal College of Surgeons to the University, each Fellow of the College resident within ten miles of Edinburgh, is, in each year in which he pays a subscription of one guinea to the Library of that University, entitled to have in his possession at one time ten volumes, but not more. The College of Surgeons and the members thereof, as such are not entitled, in virtue of

¹ In abeyance since March 1887.

any former agreement or otherwise, to any privilege or use of the Library, except as herein is specially provided, and as regards such use of the said Library the year is held to date from the *fifteenth day of October*.

4. Subject always to the provision as to the return of books at the annual period of inspection, every person in each of the above classes is entitled to retain each book for one month from the date of borrowing, if the book has been borrowed at any time between the *first day of October* and the *thirtieth day of April inclusive*, and for two months from the date of borrowing, if the book has been borrowed at any time between the *first day of May* and the *thirtieth day of September inclusive*; and further, after the expiration of such period of one month or of two months, as the case may be, he is entitled to retain each book until the annual period of inspection, unless notice is received by him from the Librarian, requiring the return of such book, which notice shall be issued on application being made for the same by any person entitled to the use of the Library, or by order of the Senatus Academicus, or of the Library Committee. The form of notice requires the return of the book within a certain short period, to be specified therein, under a penalty of not less than one shilling a volume, if the book be not returned within such period, and after the expiration thereof, under a further penalty of sixpence a volume for each day, as long as the book is not returned, until the amount of the fine exceeds the sum for which the book can be replaced in the Library, such penalties to be also specified in such notice. In the event of the Library possessing more than one copy of the book so applied for, and of all the copies being out of the Library, such notice as aforesaid must be sent to the earliest borrower.

X. The use of the Library by *Matriculated Students of the University* is regulated as follows :—

1. Every Matriculated Student is entitled to have in his possession two volumes at one time ; and is entitled to retain any book for two weeks from the date of borrowing ; and further, to re-borrow any book for successive periods of two weeks, unless an application for the same shall, in the meantime, have been made by another person entitled to the use of the Library. It is in the power of the Senatus Academicus, if they shall think it expedient, to allow Students, either generally or during any particular period of the year, to be in possession of more than two volumes at a time.
2. It is in the power of the Senatus Academicus, from time to time, to make such regulations as to a deposit of money by Students borrowing books from the Library, as they may think expedient ; and also to regulate the use of the Library by Students in consulting books in the Library itself.

[Every Student before borrowing books must exhibit his Matriculation Ticket and at least One Professor's Ticket, and deposit £1 at the Matriculation Office, after which his name will be enrolled in the Library books.]

3. No certificate of attendance upon a class may be granted by a Professor to any Student without the production of evidence to the Professor that the Student has duly returned all books which he may have borrowed from the Library.

XI. Students enrolled by the University of Edinburgh as attending the lectures of extra-academical teachers in Edinburgh (under the sixth sub-section of the sixth section of Ordinance, No. 8, Edinburgh, No. 3), are entitled to the like privileges in connection with the Library of that University, and are subject in the same manner to any regulations to be made by the Senatus, as Matriculated Students of the University ; and no certificate of attendance on the lectures of any such teacher may be given to any Student so enrolled without the production of evidence

to the teacher that the Student has duly returned all books which he may have borrowed from the Library.

XII. It is in the power of the *Senatus Academicus*, from time to time, to grant the use of the Library to such extent, and on such conditions, as they may think expedient, to persons for purposes of literary research, and that whether such persons are members of the University or not. But no such privilege can in any case be granted except by minute of the *Senatus*, specifying the grounds on which the grant is made, and the conditions which have been attached thereto, an extract of which minute must be forthwith transmitted to the University Court.

XIII. All grants of the use of the Library made by the *Senatus Academicus*, in pursuance of the preceding section, terminate at the annual period of inspection of the Library, but may be renewed under like conditions, if again applied for, on the expiration of that period: Provided always, that the Library Committee may be empowered by the *Senatus* to renew any such grant until the first meeting of *Senatus* after the expiration of the annual period of inspection, but no longer.

XIV. In the event of any book being lost or injured while in the possession of a person entitled to the use of the Library, he is liable either to replace the same, or to pay such fine, either as representing the value of the book, or otherwise, as may be fixed by the *Senatus Academicus*, or by the Library Committee, in the event of their having been empowered by the *Senatus* to fix the amount of such fines.

XV. So long as any person remains in possession of a book which he is not entitled to retain, or allows any fine incurred by him to remain unpaid, the right of such person to borrow or retain any books whatever, or to exercise any of the privileges of the Library, is suspended and remains in abeyance.

XVI. No book can, in any case, be given out of the Library except to the borrower in person, or to some one having written authority from him.

XVII. On the expiration of the annual period of inspection,

the Librarian must report to the *Senatus Academicus* in reference to the year then ended :—

1. The particulars of every case of admission to special privileges in the use of the Library :
2. The particulars of every case in which a person's right to the use of the Library has been suspended, or is in abeyance :
3. Every case of a book belonging to the Library having been replaced at the expense of a person entitled to the use of the Library :
4. A list of all books belonging to the Library known or found at the time of the inspection to be amissing or seriously injured :
5. Any other matter which the Librarian may think it of importance to bring under the notice of the *Senatus*, or regarding which the *Senatus* may have directed him to report :

and the *Senatus* is required to forward a copy of the Librarian's Report to the University Court with their remarks.

XVIII. At the conclusion of the annual period of inspection, a list is made of all persons who may have failed to return by that time any books borrowed by them, or to pay any fines incurred, along with the names of the books so unreturned, and the amounts of the fines then due ; and this list is exhibited in a conspicuous place in the Library ; and no name may be removed therefrom, until in each case the book or books be returned or replaced, or the fine or fines, which may have become due, be paid.

The following Supplementary Regulations are now in force :—

I. The provision of Sub-section 1 of Section X. of the above Regulations is limited in its application to the use of the Library by Students who are not Graduates of the University ; and, as regards such Students, it is in the power of the *Senatus Academicus*, if they think it expedient, to fix a certain longer period than two weeks from the date of borrowing as the period during which they are entitled to retain books, and that either generally or as applicable to any particular portion of the year, as the *Senatus*

may think expedient. Any such extended period, and also the portion of the year to which the same applies, must be specified in the minute of the Senatus authorising the same, and an extract of such minute must be forthwith transmitted to the University Court.

II. Subject to the preceding Regulations, and specially to the Regulations in Sub-section 4 of Section IX., the following classes of persons are entitled to the use of the Library, to the extent and under the conditions hereinafter specified, that is to say :—

1. Every person who has retired, or who shall hereafter retire, from the office of Principal or Professor on a retiring allowance, is entitled to have in his possession at one time ten volumes, but not more.
2. Any assistant to a Professor, to whom the Senatus Academicus think it expedient to grant the privilege of the Library, is entitled to have in his possession at one time ten volumes, but not more.
3. The Librarian is entitled to have in his possession at one time ten volumes, but not more ; and any Assistant Librarian to whom the Senatus Academicus think it expedient to grant the privilege of the Library is entitled to have in his possession at one time four volumes, but not more : Provided always, that all books borrowed by the Librarian, or by any such Assistant Librarian as aforesaid, are duly and regularly entered in the ordinary Records of the Library as being so borrowed, in the same manner as books borrowed by other persons.

READING ROOMS.

I. UNIVERSITY (OLD) BUILDINGS.

There is attached to the Reading Room of the University Library a separate collection of books set apart for the consultation of Students.

Any Student wishing to consult books from this Reading

Room Collection must insert in one of the slips provided for the purpose the number of his Matriculation Ticket, his Name and Residence, and the Title of the Book he may wish to consult, and present the slip to the Librarian in attendance. Each separate Book must be applied for by means of a separate slip.

Each slip so presented will render the person who has signed it responsible for the book named upon it. The counterfoil of slip should, therefore, in each case be re-claimed from the Librarian in attendance, when the Book is returned, or whenever the Book applied for is not available.

Every volume must be returned by the person who has used it, before he leaves the Reading Room. Students are forbidden to leave on the table the Books used by them ; they are required to place them in the Librarian's hands, and to demand back the counterfoils of their slips. To prevent confusion, this should be done a few minutes before the close of each hour by those who have to attend classes at the commencement of the next hour.

In addition to the books in the Reading Room Collection, each Student is allowed to consult in the Reading Room Two Volumes daily from the General Library, provided always that he has handed in on the previous day, before 2 o'clock P.M., slips applying for these two works. The same rules will then apply to such books as to those consulted from the Reading Room Collection.

No conversation, or noise likely to disturb readers, is permitted in the Reading Room.

The Librarian is responsible for the management of the Reading Room. Any point of difficulty that may arise must be referred to him for decision, or, if necessary, through him to the Library Committee.

Every Student, on first applying for books in the Reading Room, must exhibit his Matriculation Ticket for Registration in the Book kept for the purpose in the room.

All books taken into the Room from the General Library shall be carefully examined and returned to their place in the General Library each day. No books shall be issued from the General Library, for use in the Reading-Room, after 3.20 in Winter or

after 2.30 in Summer; and all books from the General Library shall be given up in the Reading-Room at 3.45 in Winter and 2.45 in Summer.

The Reading-Room is open every night of the week except Saturday during the Winter Session, between 8 and 10 P.M. Books required from the General Library must be demanded in writing before 3 o'clock.

II. UNIVERSITY NEW BUILDINGS.

In the University New Buildings is a Students' Reading-Room containing Books of Reference for those attending the Classes in the Faculty of Medicine. The Regulations as to consulting Books are similar to those in the Reading-Room in the University (Old) Buildings. See p. 58. It is open daily, from 9 A.M. to 5 P.M. except on Saturdays, when it is closed at 12 noon. It is open in September and during the week in which the Spring Holiday occurs (Saturday excepted), from Ten to One. It is closed during August and the Christmas Holidays, and on holidays and Saturdays during the Summer vacations.

THEOLOGICAL LIBRARY.

This Library was founded in 1698 for the special use of Students in Theology. It contains above 10,000 volumes. The management, by the amended constitution (1863), is vested in a Committee of six Curators, chosen by ballot, by the Cives of the Library, from their own number. Students of Divinity of this University, or any who have been Students of Divinity at any Scottish University, are admitted as Cives of the Library on payment of an annual contribution of two shillings and sixpence in the former case, and of five shillings in the latter. No one who, when a Student of Divinity in this University, has failed to enter as a Civis, is in any after year allowed to do so, until he has paid up the arrears of two shillings and sixpence for each year of his Theological Course in which he has failed to pay the said contribution. No Civis can be elected a Curator unless

he be at least in the second year of his attendance at the Divinity Hall. The election takes place in the second week of December, one-third of the Curators going out annually by rotation. The Curators elect one of their own number to be Treasurer. The Curators and Treasurer report the state of the funds, &c., to the Cives, the Theological Faculty, and the Senatus Academicus. The books purchased are selected by the Curators, subject to the approval of the Faculty of Divinity, and are restricted to theological works, and works subservient to theological study. The Professor of Divinity, who is *ex officio* Honorary Librarian, appoints annually an acting Librarian. Books may not be kept out of the Library longer than two months.

PORTRAITS AND BUSTS IN THE SENATE HALL, LIBRARY,
COURT ROOM, ANATOMICAL MUSEUM, MUSIC
CLASS ROOM, AND DOME.¹

I. PORTRAITS.

There are twenty-seven Portraits of Benefactors, Principals, Professors, and others, by Raeburn, Sir John Watson Gordon, and other Artists, in the Senate Hall, four in the Library, sixteen in the University Court Room, and one in the Music Class Room.

Portrait presented since separate Catalogue was printed.

James Lorimer, M.A., LL.D., Dr Jur., Professor of Public Law (1862-1890), painted and presented by John A. Lorimer, A.R.S.A.

II. BUSTS.

There are forty Busts in the Upper Library Hall, two in the Anatomical Museum, and one in Room in Dome.

In order to honour and perpetuate the names of Benefactors who have founded Scholarships, Bursaries, or new Chairs in the University, the University authorities have made arrangements for placing their Busts or Portraits in the Library and University Court Room.

Regarding as Benefactors the eminent Professors who have elevated the character of the University by their writings or discoveries, the University desires to procure Portraits or Busts of James and David Gregory, Colin Maclaurin, Matthew Stewart, Dr Cullen, Joseph Black, Dr James Gregory, Dr Alison, Dr Chalmers, Sir Chas. Bell, Lord Woodhouselee, Dr Thos. Chas. Hope, Professors Miller, Ross, Macdougall, Muirhead, Lorimer, Sellar, and Campbell Fraser.

¹ There is a separate printed Catalogue of the Portraits and Busts in the University, and of the Torrie Collection. A detailed Catalogue will also be found in the Calendar for 1890-91, p. 61, as well as in the previous Calendars.

TORRIE FINE ART COLLECTION.

Sir James Erskine of Torrie, by a Will, dated April 1834, bequeathed to the University his Pictures, Bronzes, and Marbles, "for the purpose of laying a foundation for a GALLERY for the encouragement of the Fine Arts." The collection is at present temporarily deposited in the National Gallery until funds can be obtained for its suitable display in the College, and for carrying more fully into effect the intentions of the testator.

The Pictures, forty-five in number, include choice specimens of the works of different Masters, especially in the Flemish and Dutch Schools. The Marbles, seventeen in number, and twenty-three Bronzes, have been chosen with a correct appreciation of the merits of this department, and the whole collection reflects credit on the taste and public spirit of Sir James Erskine.

Museums.

A MUSEUM COMMITTEE, consisting of three members of the University or others, not being members of the Senatus Academicus, appointed by the University Court, and of six members appointed by the Senatus Academicus, is charged with the immediate superintendence of all Museums belonging to the University, and of the contents thereof, and of any collections, furniture, or apparatus, or objects acquired, or to be acquired, for the use of the University or of any class therein. The members of the Committee, in the proportions aforesaid, are appointed by the University Court and Senatus Academicus respectively at their first meeting after the commencement of the Winter Session in each year.

Members of Committee for 1891-92 appointed by the University Court.

The Right Hon. the Lord Provost ; Patrick Heron Watson, M.D. ;
John Duncan, M.D.

Appointed by the Senatus Academicus.

Professors Tait, Geikie, T. R. Fraser, Greenfield, Sir William
Turner, Rutherdford.

The University contains the following Museums, several of which belong partly to the Professors of the respective subjects :—

1. The NATURAL PHILOSOPHY MUSEUM contains a large and very valuable collection of physical apparatus, chiefly of modern construction.

2. MUSEUM OF MUSIC AND MUSICAL INSTRUMENTS. — A very interesting and valuable collection of acoustic and antique musical instruments.

3. GEOLOGICAL MUSEUM.—This collection is for class purposes. It exhibits the characters of minerals and rocks, and the typical fossils of the different geological systems.

4. FINE ART MUSEUM.—A small collection of casts, photographs, and drawings, illustrating the main points in the history of classical art. The collection is housed in the Dome above the portal of the University.

5. MUSEUM OF THE ROYAL BOTANIC GARDEN. — This Museum is open to Students.

6. THE PHYSIOLOGICAL MUSEUM.—This museum contains a large collection of Physiological Instruments, Microscopes and Microscopical Appliances, Diagrams, and Preparations, partly belonging to the University and partly to the Professor.

7. PRACTICE OF PHYSIC MUSEUM.—The Practice of Physic Museum contains pathological specimens, drawings, models, diagrams, and charts, the property of the Professor.

8. THE ANATOMICAL MUSEUM.—This Museum was founded in 1800 by Dr Monroe, *secundus*, who presented his own Anatomical Collection, and that of his father, to the University, “to be used by his future successors in office for the purpose of demonstrating and explaining to the Students the structure, physiology, and diseases of the human body.” In the year 1859, Sir David Monroe, M.D., presented a collection of anatomical preparations, which had been formed by his father, Dr Alexander Monroe, *tertius*. Numerous additions were also made to the Museum by the late Professor Goodsir, more especially in the department of Comparative Anatomy, and on his death the Senatus Academicus purchased from his representatives his Private Museum, which has been added to the Collection. The Museum now contains several thousand specimens in illustration of Human Anatomy, both normal and pathological, and of Comparative Anatomy.

The Conservator will be glad to receive contributions of rare and interesting specimens from Graduates and former Students of the University. He is especially desirous of making the

collection thoroughly representative of the osteology of the different Races of Men, and requests the gift of skulls and other bones of the skeleton from present and former pupils.

The Collection was transferred in the Session 1884-5 to the University New Buildings for the School of Medicine in Teviot Row, where it is arranged in a large and handsome Hall possessing two galleries. It is open at certain hours to all matriculated students. The pathological collection is placed in the upper gallery. The spirit-preparations in illustration of normal Human and Comparative Anatomy are arranged in the lower gallery. The osteological collection is disposed in the cases on the floor of the Museum, and suspended in the centre of the Hall. In 1887 the Henderson Trustees committed to the custody of the Conservator of the Museum their valuable collection of crania and casts.

Conservator of the Museum, the Professor of Anatomy ; Assistant-Conservator, Mr James Simpson.

9. CHEMISTRY MUSEUM.—Sir Lyon Playfair, on his resignation of the Chair of Chemistry, presented to the University the collection of chemical substances which he used in illustrating his lectures. This collection has been from time to time increased by presents from chemical manufacturers and others, and also by the addition of substances prepared in the University Laboratory.

10. THE OBSTETRICAL MUSEUM.—With the exception of a few wet and dry preparations left by Professor Hamilton, contains instruments, preparations, models, and diagrams, collected by Sir James Y. Simpson, and added to by the present Professor of Midwifery, to whom they belong.

11. THE MUSEUM OF NATURAL HISTORY.—The old Museum of Natural History was established in 1812 in connection with the University. It contained Zoological, Geological and Mineralogical Collections. The greater portion of it was formed by the exertions of Professor Jameson, who was for fifty years Professor of Natural History and Regius-Keeper of the Museum. In 1854 the Museum was transferred by the Town Council, at that time

the Patrons of the University, to Government, under whose control it has since continued, and the whole of the collections were at that time removed from the rooms occupied by them in the University to the Natural History Department of the New Museum of Science and Art. They are still, however, available for the educational purposes of the University, and are freely accessible to the Students attending the classes of Natural History and Geology.

A Zoological Museum is now being formed in the University. Graduates, former Students and others interested in the Natural History Department will greatly aid in this important undertaking by presenting specimens to the Keeper—the Professor of Natural History.

12. MATERIA MEDICA MUSEUM.—The Materia Medica Museum contains one of the most complete collections of medicinal and food substances in this country. The collection was founded by Professor Andrew Duncan. His successor, Sir Robert Christison, during his long incumbency of the Professorship, added a large number of valuable specimens, which were, for the most part, mounted by himself with singular neatness. The present occupant of the Chair has made further extensive additions. The Museum has been greatly enriched by interesting donations to the Professor from former members of the Class in all parts of the world. Besides the general collection, there is a Students' Reading Museum, containing specimens of the medicinal substances usually employed in this country, which has been formed and arranged by the present Professor of Materia Medica.

13. SURGICAL MUSEUM.—This collection was formed by the late Professor Spence, and has been largely extended by the present Professor, to whom it now belongs. During the last five years many additions have been made, both of pathological preparations and of plaster and gelatine casts, illustrative of Surgical Anatomy and Pathology. A complete catalogue may, on application, be consulted by practitioners of medicine.

THE ROYAL BOTANIC GARDEN AND ARBORETUM.

The Royal Botanic Garden and Arboretum, Inverleith Row, is connected with the University, in so far as the Professor of Botany delivers his Lectures in the Lecture-hall in the Garden. The grounds extend to about 60 acres, and there is an extensive range of Greenhouses and Hothouses, with a large Palm-house. There is an arrangement of herbaceous plants according to the Natural System.

The Garden is open daily. Specimens of plants for study are supplied to Students so far as practicable.

The Botanical Museum in the Garden is open daily to Students, and the University Herbarium, which is placed in the Garden, may also be consulted between the hours of 10 and 1, and 2 and 5, under the direction of the Professor or the Curator.

The Botanical Laboratory in the Garden is open daily for work and original research.

I

FACULTY OF ARTS
(OR OF LITERATURE, SCIENCE AND
PHILOSOPHY).

1892-93.

Dean.

PROFESSOR CHRYSTAL, LL.D.,
5 Belgrave Crescent, Edinburgh.

Programme of Classes.

SUMMER SESSION, 1892.

The Classes will be opened as follows, and will be closed on Friday, 22nd July.

Classes.	Days and Hours.	Professors.	Class Fees.
Elementary Physics (mainly for Students of Medicine).....	2 May, 10 o'cl.	Prof. Tait and Assistant	£3 3
Physical Laboratory...			2 2
History	12 May, 5 ,,	Prof. Kirkpatrick	3 3
Sanskrit	2 May, 3 ,,	Prof. Eggeling, ..	3 3
Engineering Field-Work (Surveying, Levelling, &c.)	14 June, 9.30 ,,	Prof. Armstrong,	3 3
Geology (Mon., Wed., Fri.).....	2 May, 4 ,,	Prof. Geikie, ...	3 3
Field Demonstrations on Saturdays.			
Elementary Hebrew ¹ ...	2 May, 10 ,,	Prof. Adams and Assistant.	1 11 6

TUTORIAL CLASSES.

These Classes commence on Monday, 2nd May, and close on Friday, 22nd July.

Classes.	Hours.	Professors' Assistants.	Class Fees.
Senior Humanity.....	9-10	Francis R. Jamieson, M.A.	£2 2
Junior Humanity.....	10-11		
Third Humanity.....	11-12		
Junior Greek.....	9-10	A. Douglas Thomson, M.A.	2 2
Senior Greek.....	10-11		
Third Greek.....	12-1		
Junior Mathematics.....	11-12	R. E. Allardice, M.A.	2 2
Senior Mathematics.....	12-1		
Advanced Mathematics.	10-11		
Natural Philosophy.....	11-12	William Peddie, D.Sc.	2 2
Analytical Dynamics....	9-10		
Logic & Psychology.....	1-2	R. P. Hardie, M.A. (Edin.), B.A. (Oxon.)	1 11 6
(Mon., Wed. & Fri.)..			
Moral Philosophy.....	12-1	Charles M. Douglas, M.A.	1 11 6
(Mon., Wed. & Fri.)..			
Rhetoric and English Literature	2-3	G. Gregory Smith, M.A. (Edin.), B.A. (Oxon.)	1 11 6

¹ To prepare Students for entering the Junior Class in Winter Session.

CLASSICS.—In the Senior Classes of Greek and Latin, Students are specially prepared for the M.A. Pass Examinations in Classical Literature to be held in October 1892 and April 1893. Most of the prescribed books will be read, and some Lectures will be given on the Literature. This course may with advantage be taken by those who have attended the Junior Classes and are about to enter the Senior next Winter Session, and by those who have completed the attendance required for the classical part of their Degree, but intend to go up for examination in October instead of April next. The Junior Classes are intended to meet the wants both of the less advanced students who have already attended the Winter Classes, and of those who are preparing to enter on the regular Winter Course for the first time in October next. Part of the work prescribed for the M.A. Pass Examinations in October 1892 and April 1893 will be read, and easier composition will be done. Advanced Classes in Greek and Latin will be formed for the reading of the more difficult authors. These Classes are intended as a preparation for the Advanced Winter Courses. The authors read will be specially selected to suit those preparing for University Scholarship Examinations, and for Classical Honours.

MATHEMATICS.—In the Junior Class of Mathematics the Lectures will be confined to the subjects necessary for the Junior Winter Course, namely, Plane Geometry, and the simpler portions of the Elements of Algebra. The Lectures in the Senior Class, being designed for those who have already attended the Junior Winter Course, or who wish to revise the work of the Senior Winter Course, will embrace Trigonometry, Algebra, and Conic Sections. These Classes afford to Students an opportunity of preparing either for the M.A. Pass or 1st B.Sc. Examination in Mathematics. In the Advanced Class of Mathematics, which has been instituted for the benefit of those preparing to join the Advanced Winter Course, Lectures will be given on Determinants, Theory of Equations, Co-ordinate Geometry, and the Elements of the Differential and Integral Calculus.

NATURAL PHILOSOPHY.—The Course of Lectures on Natural Philosophy will include a treatment of the laws of Heat, Light, Electricity, &c., and of the Elementary Principles of Dynamics. It will be specially adapted to the wants of Students preparing for the 1st B.Sc. or Departmental M.A. Examination in Physics, and for the Natural Philosophy and Mechanics Preliminary Examinations in Medicine and Science. The Advanced Course is intended for Students who are preparing for the Advanced Winter Course, or for the 2nd Science Examinations.

LOGIC AND PSYCHOLOGY.—To prepare for the Class of Logic and Psychology next Session, and for the M.A. Pass and other Examinations. Elements of Logic (Fowler or Jevons). Introduction to Psychology ("Selections from Berkeley," Fourth Edition). "Locke" (Philosophical Classics).

MORAL PHILOSOPHY.—To prepare for the Class of Moral Philosophy, and for the M.A. Pass and other Examinations. Professor's "Handbook"; Sidgwick's "History of Ethics."

RHETORIC AND ENGLISH LITERATURE.—Lectures on the History of English Literature and on the History of the English Language, with special attention to the subjects for the M.A. Examination. A Class for the study of Old English (Anglo-Saxon) and Middle English may also be formed.

ADVANCED CLASSES will be conducted if a sufficient number intimate their intention of joining.

The classes will be held on Wednesday, 19th October, and will meet daily (Saturdays excepted), unless otherwise stated. They will meet for the last time before the Christmas holidays on Wednesday, 21st December; will reassemble on Wednesday, 4th January 1893, and will be closed on Thursday, 30th March 1893. The Annual Graduation Ceremony in Arts, &c., will be held on Thursday, 13th April 1893. See note 2, page 78.

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.
First Humanity ... {	19 Oct., 12 & 20 ^{cl.}	Prof. Good-	£3 3
Second Humanity . {	19 Oct., 10 ,,	hart..... {	3 3
First Greek	19 Oct., 9 & 1 ,,	Prof. Butcher... {	3 3
Second Greek	19 Oct., 11 ,,		3 3
Third Greek.....	19 Oct., 2 ,,		2 2 ¹
First Mathematics ...	19 Oct., 12 ,,		3 3
Second Mathematics..	19 Oct., 10 ,,	Prof. Chrystal... {	3 3
Third Mathematics....	19 Oct., 9 ,,		3 3
Logic & Psychology...	19 Oct., 1 ,,		3 3
Metaphysics and	3 Nov., 3 ,,	Prof. Seth	2 2 ²
Hist. of Philos. } (Mon. Thurs.) }			
Moral Philosophy.....			
Do. Advanced	19 Oct., 12 ,,	Prof. Calder-	3 3 ₂
(Tues. & Fri.)... }	1 Nov., 3 ,,	wood	2 2
Natural Philosophy...	19 Oct., 11 ,,	Prof. Tait	3 3
Do. (Advanced Class)	31 Oct., 10 ,,		3 3
Physical Laboratory..	7 Nov., 10 ,,		2 2
Rhetoric & English	19 Oct., 4 ,,	Prof. Masson.....	3 3
Literature..... }			
History ³			
History and Const.	17 Oct., 3 ,,	Prof. Kirkpatrick	1 1 ⁴
of U.S.A. (Mon., } (Wed. & Fri.) }			
Practical Astronomy ⁵			
Agric. & Rural Econ.	27 Oct., 11 ,,	Prof. Copeland...	3 3
Music.....	26 Oct., 9 ,,	Prof. Wallace	4 4
1. History of Music ⁶	20 Oct., 3 ,,	Prof. Niecks.. {	1 1
Course of 20 Lec-			
tures on Thursdays).			
2. Harmony, Melody,	21 Oct., 3 to 4		3 3
and Rhythm; their			
Theory and Practice			
(Course of 40 Lec-	and 4 to 5		
tures, 80 hours, Tues.			
& Fri.; second hour	o'clock.		
optional).			

¹ The fee is £3, 3s. for those who have not previously attended the Greek Classes qualifying for graduation.

² For those only who have previously attended the Junior Class.

³ Given in Summer Session; but a full Winter Course will be given when the new Ordinances come into operation.

⁴ Five shillings University entrance-fee for non-matriculated Students.

⁵ This Course will qualify for Graduation as soon as the new Ordinances come into operation.

⁶ Non-matriculated students may attend one or all of these Classes on payment of the University Entrance Fee of 5s. Students who attend Courses Nos. 1 and 2 or 2 and 3 may attend the third Course free of charge.

WINTER SESSION, 1892-93—continued.

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.
Music—(continued.)..			
3. Æsthetic and Formal Analysis (Course of 20 Lectures on Mondays).	24 Oct., 2 o'cl.	Prof. Niecks.....	£1 1
Sanskrit and Comparative Philology ¹			
(Junior Class).....	3 Nov., 3 „	Prof. Eggeling	4 4
(Senior Class).....	„ 4 „		4 4
Engineering	3 Nov., 9 „		4 4
Sanitary Engineer- ing and Drawing	9 Nov., 10 „		3 3
Do., Short Addi- tional Course	11 Jan., 1 „	Prof. Armstrong	1 1 ^{2,3}
Geometrical & Me- chanical Drawing	4 Nov., 10 to 2 „		3 3
Geology & Mineralogy ¹	2 Nov., 4 o'cl.	Prof. Geikie	4 4
(Mon., Wed. & Fri.)	4 Nov., 3 to 4 „		2 2
Practical Class (daily)	21 Oct., 5 „		3 3
Com. and Pol. Econ., ¹ and Mercantile Law.			
Economics as applied to Agriculture (Bien- nially) (Mon., Wed. & Fri. till Christmas)	31 Oct., 3 „	Prof. Nicholson	1 1
Theory, Hist., & Art of Education ¹	24 Oct., 3.10 „	Prof. Laurie	3 3
Fine Art (Tu. & Th.) ⁵	8 Nov., 5 „	Prof. Baldwin Brown	2 2 ⁴
Celtic Lang. & Lit. ¹ ...	1 Nov., 4 „	Prof. Mackinnon	2 2 ⁶

LECTURERS.

1. Gifford Lectureship on Natural Theology.

A double Course of Lectures will be delivered during the Session 1893-94. Lecturer—Professor OTTO PFLEIDERER, of Berlin University.

Forestry	26 Oct. 4 o'cl.	Colonel Bailey, R.E.	3 3 ²
Agricultural Entomology (Twenty Lectures)	5 Jan. 2 „	W. Fream, B.Sc., LL.D.	2 2 ²⁷

¹ This Course will qualify for Graduation as soon as the new Ordinances come into

² Five shillings University entrance-fee for non-matriculated Students. [operation.

³ No fee for Students in the regular Class of Engineering.

⁴ For Students of the Royal Scottish Academy, £1, 1s.

⁵ A complete Course, qualifying for Graduation, will be given if new regulations come into force. See page 104.

⁶ For Lectures only, £1, 1s.

⁷ Free to all present and past Students of the Agriculture Class.

The following means are afforded for Practical Instruction :—

LABORATORIES.

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

GEOLOGICAL AND PETROLOGICAL LABORATORY, for practical instruction in the study of Minerals, Rocks, and Fossils, and the methods of plotting and drawing geological maps and sections, is open daily from 3 to 4, under the superintendence of Professor Geikie.

ENGINEERING DRAWING CLASS ROOM, open daily during the Winter Session, from 10 A.M. to 2 P.M., for practical instruction in drawing and drawing-office routine.

THE ENGINEERING (FULTON) LABORATORY, open on fixed days during the Winter Session, for the practical instruction of Students in the processes employed by the Engineer in the Experimental Determination of the Physical and Economical Constants of Materials, Machines, and Prime Movers, and in the Practical Applications of Electricity.

PRACTICAL INSTRUCTION IN OFFICE AND FIELD-WORK daily, in connection with the Summer Course of Lectures on Surveying, Leveling, &c., from 11 A.M. to 4 P.M. each day.

THE AGRICULTURE DEPARTMENT in the Museum of Science and Art, is open daily to Students attending the Agriculture Class. Excursions to farms are made on Saturdays by Members of the Agriculture Class, and demonstrations are given from time to time in the Agriculture Laboratory. The Leading Agricultural Newspapers are left for the use of Students in the Agriculture Lecture Room.

The ROYAL OBSERVATORY is open to Students of Practical Astronomy on two evenings of the week, from 8 P.M.

MATRICULATION FEES.

For the Academical Year, 1st October to 1st October,	. £1 0 0
For the Summer Session only, 1st May to 1st October,	. 0 10 0
University entrance-fee in lieu of Matriculation for each of certain short Courses (see Class Lists),	. . . 0 5 0

The Curriculum in Arts.¹

—o—

[*Note.*—The Ordinance of the Scottish Universities Commissioners of 1889, No. 11 (General No. 6), Regulations for Degrees in Arts, dated 3rd February 1892,² will probably come into operation on 1st October 1892. A Student, however, who, at the time when the new Ordinance above referred to comes into operation, shall have begun his Course of Study with a view to Graduation in Arts under the Regulations in force at the time, may complete his Course and become a Candidate for the Degree of Master of Arts, with or without Honours, in conformity with such Regulations. And any Student who has passed the Examination hitherto required for admission to a Curriculum of Three Sessions shall, if he desire to come under the new Regulations, be exempted from the Preliminary Examination required by said Ordinance.³

After the new Ordinance has come into operation, Candidates for the Degree of M.A. may either follow the old Arts Curriculum or select one of the new Curricula instituted by the Ordinance, but in either case they must previously have passed the Preliminary Examination.

The Regulations will be subject in other respects to such alterations as may be necessary under the new Ordinance, and under Ordinance No. 13 (General No. 8, Regulations as to Examinations), when these Ordinances come into operation.]

¹ The annual amount payable for Matriculation, Class Fees, &c., of the regular course in Arts may be estimated at about £10, 10s.

² See new Ordinance, Appendix, page 22. See note 2, page 78.

³ See do., Section XXVIII.

Curriculum in Arts.

THE Ordinary Curriculum in the Faculty of Arts, with a view to a Degree, extends over FOUR WINTER SESSIONS,¹ and comprehends attendance on all the Classes enumerated in No. I. of the *Regulations for Graduation in Arts* (see p. 109).¹

But, by No. II. of these *Regulations* (see p. 109),² those who pass an Entrance Examination in Latin and Greek sufficiently well to satisfy the Faculty that they are qualified to be admitted to the Higher Classes of Latin and Greek, may, if they please, complete the Curriculum in Arts, with a view to Graduation, within THREE WINTER SESSIONS; also those who pass an Entrance Examination in Mathematics, may dispense with one of the Sessions of attendance at the Mathematical Classes.

Those who desire, in accordance with this Regulation, to be freed from a Session of attendance in the *Latin and Greek Classes*, in order that they may thus be enabled to complete the Curriculum in Arts, with a view to a Degree, within THREE Winter Sessions, must present themselves for the Examination in Latin and Greek at the commencement of the FIRST SESSION of their attendance in the Curriculum of Arts.

Those who, in accordance with the same Regulation, also desire exemption from a Session of attendance in *Mathematics*, must also present themselves for examination in Mathematics at the *commencement* of the FIRST SESSION of their attendance in the Curriculum of Arts.²

For the subjects of these Examinations in Latin, Greek, and Mathematics, see under *Entrance Examination for Curriculum of Three Sessions*, pages 113 and 114.

¹ See new Ordinance Sections II., VI. to X. inclusively; and XXI. to XXXII inclusively.

² See Preliminary Examination, new Ordinance Sections III. to V. inclusively; XXI., XXII., and XXVIII. to XXXII. inclusively.

In the event of the new Ordinances receiving the approval of Her Majesty in Council on or before the 1st day of July 1892, the dates of the First Preliminary Examination to be held under this Ordinance will be fixed by the Joint Board of Examiners and afterwards intimated.

In the case of a Student whose native language is other than European, the Senatus may, under the new Ordinance, at the Preliminary Examination, accept such language

ORDER OF STUDY IN THE FACULTY OF ARTS.¹

It is particularly recommended by the Faculty—

1. That in a Curriculum of Four Sessions, the Junior Classes of Humanity, Greek, and Mathematics, or any two of them, be attended in the *First Session*.

* * *Students who attend the Junior Mathematics, in their First Session, along with the Junior Humanity and the Junior Greek, may obtain a dispensation from attendance in the Junior Humanity from 12 to 1 o'clock.*

2. That Natural Philosophy be attended along with, or at any rate not before, one of the Mathematical Classes.
3. That in a Curriculum of Four Sessions, the Junior Class of Logic and Metaphysics be attended in the *Second Session*, or (alike in a Curriculum of Four and one of Three Sessions) at all events in a Session *preceding* that in which the Class of Moral Philosophy is attended.

PROFESSORIAL COURSES OF LECTURES.²

I. HUMANITY—(Latin).

PROFESSOR

Junior Class—12 to 1 and 2 to 3.

The work of the Class consists of—

1. Readings of some Latin author, as Virgil, Horace, Ovid, or Tibullus, Livy, Sallust, and Cicero;—
2. Lectures on Roman History or Literature;—
3. Exercises in Latin Prose Composition;—
4. Written Examinations.

for a modern European language. The Senatus may also in such a case accept as an alternative for Latin or Greek any other classical language, such as Sanskrit or Arabic, provided the Candidate shall pass in that language in a standard as nearly as possible equivalent to the higher standard of the languages included in the Preliminary Examination.

Under the new Ordinance a Fee of Ten Shillings and Sixpence will be payable by each Candidate before presenting himself for any Preliminary Examination in the University.

¹ See note 2, page 76, and notes 1 and 2, page 77.

² On the recommendation of the Senatus Academicus, the University Court have made provision for the instruction of women within the University in the subjects taught in the Faculty of Arts, so soon as the new Ordinance shall become law.

Books recommended — Bradley's Arnold's Latin Prose. Mommsen's History of Rome, abridged by Bryans and Hendry.

Senior Class—10 to 11.

The work of the Class consists of—

1. Readings of some Latin author, as Virgil, Horace, Cicero (*Letters*, or *Speeches*), Tacitus (*Annals*, or *Histories*);—
2. Lectures on Roman History or Literature ;—
3. Weekly Exercises in Latin Prose ;—
4. Written Examinations.

Books recommended—The New Latin Primer (Postgate and Vince) ; Pott's Hints towards Latin Prose Composition ; Mommsen's History of Rome, abridged by Bryans and Hendry ; Cape's Early Empire ; Cruttwell's History of Latin Literature.

*Third Class*¹—2 to 3.

The Third Latin Class meets every alternate year. It is intended to assist the studies of Candidates for University Scholarships and Honours in Graduation.

The work of the Class consists of—

1. Readings and explanations of some of the more difficult Latin Authors, such as Tacitus, Lucretius, Plautus, Martial, &c.;—
2. Lectures on Roman History and Literature, chiefly in connexion with the Books read in the Class ;—
3. Essays on questions arising out of the Lectures or Books read, and Exercises in Latin Prose Composition ;—
4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

¹ The Third Humanity Class will not meet during the Session 1892-93.

II. GREEK.

PROFESSOR BUTCHER.

Junior Class—9 to 10 and 1 to 2.

The work of the Class consists of—

1. Readings of some Greek author, as Xenophon, Lucian, Plato (an easy dialogue), Homer, Euripides, or Aristophanes (selections).
2. Lectures once a week on Greek Literature or History.
3. Exercises several times a week in Greek Prose Composition.
4. Written Examinations, partly on the work done in the Class, partly on work prescribed for private reading.

Books recommended.—W. G. Rutherford's Greek Grammar, and First Greek Syntax ; F. E. Thompson's Elementary Greek Syntax ; Clyde's Greek Syntax ; Jebb's Primer of Greek Literature ; Peile's Primer of Philology ; Fyffe's Primer of Greek History ; Cox's General History of Greece, or W. Smith's History of Greece, or Oman's History of Greece.

Senior Class—11 to 12.

The work of the Class consists of—

1. Readings of some Greek author, such as Thucydides, Demosthenes, Herodotus, Plato ; Homer ; a play of Æschylus, Sophocles, Euripides, or Aristophanes.
2. Lectures once a week on Greek Literature, History, or Philosophy.
3. Greek Prose Composition, or Translation of an Unseen Passage once a week, and a Lecture on the passage when the exercises are returned.
4. Written examinations partly on the work done in the Class, and partly on work prescribed for voluntary reading.
5. Greek Verse Composition (voluntary).

Books recommended.—W. G. Rutherford's Greek Grammar, and First Greek Syntax ; Goodwin's Greek Moods and Tenses ; Greek Syntax, by F. E. Thompson ; Sidgwick's Greek Prose Composition ; Jebb's Primer of Greek Literature ; Müller & Donaldson's History of Greek

Literature; Jevon's History of Greek Literature, or Mahaffy's History of Greek Literature; Cox's General History of Greece, or W. Smith's History of Greece, or Oman's History of Greece; Greek Verse Composition (Sidgwick and Morris); An Introduction to the Comparative Grammar of Greek and Latin, by King and Cookson.

*Third Class*¹—2 to 3.

The Third Greek Class meets every alternate year. It is intended to assist the studies of Candidates for University Scholarships and Honours in Graduation.

The work of the Class consists of—

1. Readings and explanations of some of the more difficult Greek Authors, such as Thucydides, Demosthenes, Plato, Aristotle, Æschylus, Pindar, &c.
2. Lectures once a week on Greek Literature, History, or Philosophy.
3. Greek Composition and Translation of Unseen Passages.
4. Occasional Critical Papers and Essays.
5. Written Examinations, partly on the work done in Class, and partly on work prescribed for voluntary reading.

III. MATHEMATICS.

PROFESSOR CHRYSTAL.

First Class—12 to 1.

Plane Geometry equivalent to Euclid, Books i., ii., iii., iv., and vi. (*Syllabus of Plane Geometry*, prepared by the Association for the Improvement of Geometrical Teaching forms the text of the lectures); Solid Geometry, equivalent to Euclid, Book xi.; Modern Geometry; and Elementary Algebra.

Second Class—10 to 11.

Algebra, including the elements of the Theory of Equations, and of Determinants, the Theory of Limits and the Elements of Curve Tracing; Plane Trigonometry; Conic Sections, treated geometrically and analytically; Modern Geometry.

¹ The Third Greek Class will meet during the Session 1892-93.

Third Class—9 to 10.

The Third Class Course now extends over two years, being in alternate years more elementary and more advanced.

The subjects of the elementary course are the more elementary parts of the Differential and Integral Calculus, and of the Calculus of Finite Differences, and the Analytical Geometry of the Conic Sections. It is assumed that the Student has acquired a knowledge of the Theory of Equations, and of the elements of the Theory of Determinants before he joins the Class.

The subjects of the Advanced Course are the higher parts of the Differential and Integral Calculus ; Differential Equations ; Definite Integrals with special reference to Fourier's Theorem ; Functions of Laplace and Bessel ; Higher Plane Curves ; Analytical Geometry of Three Dimensions.

Additional lectures on Quaternions, Projective Geometry, and other special subjects are given occasionally.

The course of the Session 1891-92 will be advanced.

Tutorial Classes.—In addition to the ordinary class lectures in the First and Second Classes, occasional lectures are given by the Class Assistant. The attendance on these is voluntary, and the time is devoted to the repetition of parts of the class lectures and to the working of examples.

Home Exercises are prescribed weekly in all the classes.

Written Examinations on the class lectures are held monthly during the Session. The class honours are determined solely by these examinations.

Text-Books.—As a rule *special* text-books are not prescribed ; but the student is recommended to select from the following list :—

Geometry.—Wilson's Elementary Geometry, or the Text Books of the Society for the Improvement of Geometrical Teaching, and one or more of the following, for the sake of the exercises they contain :—Mackay's, Todhunter's,

Nixon's, or Casey's edition of Euclid's Elements, and Casey's Sequel to Euclid.*

Algebra.—Chrystal, or Todhunter, Gross, Chambers's Mathematical Tables.

Solid Geometry and Conic Sections.—Wilson, Taylor (smaller work), or Taylor*² (larger work).

Trigonometry.—Walmsley, Todhunter, or Lock (M'Lelland and Preston* for Spherical Trigonometry).

Analytical Geometry.—Smith's Analytical Conic Sections; and Dyer's Exercises in Analytical Geometry. Students intending to take the Third Class are recommended to get Salmon's Conic Sections, Salmon's Higher Plane Curves,* and Salmon's Geometry of Three Dimensions,* or, instead of the last, Smith's Solid Geometry.

Projective Geometry.—Cremona's Elements of Projective Geometry translated by Leudesdorf, or Henrici's Article on Geometry, Encyclopædia Britannica (9th edition).

Higher Algebra and Theory of Equations, etc.—Burnside and Panton's, or Todhunter's Theory of Equations; Thomson's Introduction to Determinants, and Muir* or Scott;* and Salmon's Higher Algebra for those who mean to read for Mathematical Honours.

Differential and Integral Calculus.—Williamson's Treatises; Forsyth's Differential Equations*; Frost's Curve Tracing;* Boole's Finite Differences.*

IV. LOGIC AND METAPHYSICS.

PROFESSOR SETH.

Logic and Psychology—*Junior Class*—I to 2.

The course in this class falls into three parts :—

(I) An outline of the main facts of Empirical Psychology, dealing more particularly with the facts and processes of

¹ Works marked with asterisks are recommended to those only who make Mathematics a specialty.

² See note on p. 82.

cognition ; (2) The Elements of Logic, Deductive and Inductive ; (3) An introduction to the questions of philosophy, with special reference to the history of modern philosophy in England.

In the psychological part of the course no text-book is prescribed, but a manual such as Sully's "Outlines of Psychology," Clark Murray's "Handbook of Psychology," Höffding's or Dewey's Psychology may be usefully referred to in connection with the class lectures. In the logical division of the course, Fowler's Logic ("Deductive" and "Inductive") will be used to supplement the lectures. Professor Fraser's "Selections from Berkeley" will be used in the third division of the course as an introduction to the study of philosophy.

Metaphysics—Advanced Class.

This Class meets on Mondays and Thursdays at *three* o'clock.

It is intended for those who have already made some progress in philosophical study. The problems of ancient and modern thought are considered in the writings of representative philosophers. Special attention is devoted to the development of the epistemological and the ontological question in the history of modern philosophy.

The "Bruce of Grangehill and Falkland Prize" is offered annually for competition. (*See UNIVERSITY PRIZES.*)

V. MORAL PHILOSOPHY.

PROFESSOR CALDERWOOD.

Ordinary Class.

The following are the subjects embraced in the Course of Moral Philosophy :—

INTRODUCTION.—Province and Aim of Moral Philosophy.

I. PSYCHOLOGY OF ETHICS.—Knowledge of Moral Distinctions ; form and source of this knowledge ; Rival Theories —

(a.) Intuitional Theory ; (b.) Evolution Theories, — Biologic (Spencer), Utilitarian (Mill) ; Dialectic (Hegel). Impulses to Action ; Restraints upon Action. The Will—its Nature and Functions. Libertarian and Deterministic Theories. Moral Sentiments ; their Nature and Influence. Disorder of Moral Nature.

2. METAPHYSIC OF ETHICS.—The Being of God ; His Attributes ; His Moral Government. The Foundation of Virtue ; the Relation of Divine Sovereignty to Free-Will ; the Relation of Human Desire to Divine Sovereignty ; the Origin of Evil ; the Immortality of the Soul.

3. APPLIED ETHICS.—Man's Position in the World ; Guidance of the Individual ; Formation of Moral Character ; Sociology ; Natural Religion.

4. THE HISTORY OF MORAL PHILOSOPHY.—The Rise of Philosophy ; Distinction of Moral from Intellectual Philosophy ; Development of Systems of Moral Philosophy in Ancient and Modern Times.

The Course includes lectures, oral and written examinations, and essays.

Text-Books.—The Professor's "Handbook of Moral Philosophy ;" Kant's "Groundwork of the Metaphysic of Ethics ;" Schwegler's "History of Philosophy."

Books recommended for reference.—Price's "Principal Questions in Morals," Butler's "Sermons on Human Nature," Reid's "Active Powers," Mill's "Utilitarianism," Herbert Spencer's "Data of Ethics," Wallace's "Logic of Hegel," Hegel's "Philosophy of the State," Green's "Prolegomena of Ethics," Sidgwick's "Methods of Ethics," Fleming's "Vocabulary of Philosophy," Ueberweg's "History of Philosophy."

Advanced Class.

Intended chiefly for those who have already attended the Ordinary Class, or for students who have specially concentrated on philosophic study.

Subjects of study.—The Teaching of Socrates as presented in Xenophon's "Memorabilia," and in Plato's "Protagoras" and "Apologia." The Ideal Philosophy of Plato as developed in the "Republic," and in other Dialogues. Aristotle's "Nicom. Ethics." The rise of Modern Philosophy; the "Method and Meditations" of Des Cartes; Spinoza's "Ethics." The Scepticism of Hume, and the fresh start of Philosophy subsequently. The Scottish Philosophy; Kant's Ethical System; Fichte's Practical Philosophy; Hegel's Ethics; Schopenhauer's Pessimism, in its Ethical Aspects; Later developments of the Ethics of Evolution.

Books recommended.—Zeller's "Socrates and the Socratic Schools," Plato's "Republic," Jowett's Translation, Sir Alexander Grant's "Ethics of Aristotle," Zeller's "Stoics, Epicureans, and Sceptics"; Kant's "Ethics," Semple's or Abbott's "Kant's Theory of Ethics," Hegel's Ethics in Morris's "Hegel's Philosophy of the State and of History," Grigg's Philosophical Classics; Green's "Prolegomena to Ethics"; Utilitarianism, as presented in Mill's "Utilitarianism;" in Spencer's "Data of Ethics" and "Justice;" and in Sidgwick's "Methods of Ethics."

VI. NATURAL PHILOSOPHY.

PROFESSOR TAIT.

ORDINARY CLASS.

The subjects embraced in the Course of Natural Philosophy are the following :—

1. Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.
2. Abstract Dynamics—including Kinematics, Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with their applications.
3. Sound, and Wave-propagation in general.
4. Heat, with its application to the Steam-Engine, &c.
5. Light (Geometrical and Physical Optics).

6. Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto-Electricity, Electro-Dynamics, and Magnetism, with their practical applications to the Telegraph, &c.

7. Conservation of Energy.

8. Plane and Physical Astronomy.

9. Meteorology.

Properties of Matter, Abstract Dynamics, and Conservation of Energy, together with two or three others of the above divisions of the subject, are treated in detail every Session, the remainder being necessarily discussed in a more superficial manner, as it is impossible to enter at length into all in the course of a single Session.

It is intended that in Session 1892-93, in addition to Sections 1, 2, and 7, Sections 5 and 6 shall form the more detailed part of the Course.

The whole Class is examined at short intervals during the Session upon the subjects already treated in the Lectures; and a prize is given for the best answering. In these examinations no Mathematics are requisite, except the most elementary portions of Arithmetic, Algebra, and Geometry.

In the months of January and March there are special Examinations upon prescribed subjects; and, on these two occasions only, the Class is divided into two parts—the division depending mainly upon the students' proficiency in Mathematics. In the Lower Division, the elements of Algebra and Geometry alone are required; in the Higher Division, Algebra, Geometry, and the Geometry of the Conic Sections are necessary.

The Prizes in each division of the Class are determined by adding the marks obtained in the two sets of Examinations above described. No Student who has obtained a Prize in either Division of the Class can be allowed to compete, in a subsequent Session, for a Prize in the same or in a lower Division.

The Text-Book for the Dynamical part of the Course will be Thomson and Tait's "*Elements of Natural Philosophy*" (Pitt Press, Cambridge). For the remainder of the subject the

student may consult some of the following books :—Clerk-Maxwell's "Matter and Motion," Jenkin's "Electricity," Balfour Stewart's "Lessons in Physics," Tait's "Properties of Matter," "Heat," and "Light."

The special Examinations in January 1893 will be on the following subjects :

Higher Division.

Newton's "Three Sections" (Goodwin's "Course of Mathematics," Frost's "Newton," or any good edition of the *Principia*).

Lower Division.

Herschel's "Astronomy," in Lardner's Cyclopædia, omitting the chapter on Perturbations. A series of explanatory lectures will be given by the Class-Assistant before this Examination.

The subjects for the March Examinations in both Divisions will be Kinematics and Dynamics. The range will depend upon the progress which the Class has made in these subjects.

Subject of Voluntary Essay to be given in before the end of March 1893—"Light as an Electromagnetic Phenomenon."

ADVANCED CLASS.

For the benefit of Engineering Students, and of Arts Students wishing to Graduate with Honours in the Department of Mathematics, Professor Tait has opened an Advanced Class. Three lectures are given per week, and the subjects are—

Dynamics (generally),
Theory of Heat,
Physical Optics,
Theory of Electricity,

all treated with regard to their practical applications.

The text-book for the first of these subjects is the article *Mechanics*, in the last edition of the *Encyc. Brit.*

SUMMER CLASS OF PHYSICS, *SPECIALLY FOR MEDICAL STUDENTS.

For particulars, see Courses in Faculty of Medicine.

PHYSICAL LABORATORY.

This has been established with the view of affording Students a practical knowledge of the construction of, and manner of using physical apparatus, and with the mode of conducting experimental inquiries. The Laboratory is open for five or six hours daily during the Winter and Summer Sessions, under the personal superintendence of the Professor and his Class-Assistant. Fee, £6, 6s. for the Winter Session. It is hoped that, with the valuable collection of apparatus in the Museum, results of real use to science may be obtained.

A practical class, for the instruction of beginners in the elementary processes of measuring Time, Mass, Length, Angle, Force, &c., will be formed in the Winter and also in the Summer Sessions. The course, in each case, will extend over about three months. The fee is £2, 2s. The Professor reserves to himself the right of admitting *free*, to general Laboratory work, such matriculated students of the practical class as may show special diligence and aptitude.

VII. RHETORIC AND ENGLISH LITERATURE.

PROFESSOR MASSON.

The business of the Class will comprehend :—

I. Till about Christmas, two parallel courses of Lectures : one on the Principles of English Style and Composition, with the relative portions of the Ancient Rhetoric ; the other on the Literary History of the British Islands as far as to 1250, with special attention to the Anglo-Saxon Literature, and with a view of the History of the English Language from its Anglo-Saxon stage to the beginnings of the present English.

II. From about Christmas to the end of the Session, a Course of Lectures on the History of English and Scottish Literature from 1250 to the present time : divided into Periods thus :—
(1. From 1250 to 1400, ending with Chaucer, Langland, and

Barbour; (2.) From 1400 to 1580, including the English Poets from Lydgate to Wyatt, Surrey, and Sackville, and the Scottish Poets from James I. to Dunbar, Gavin Douglas, and Lyndsay; (3.) From 1580 to 1625, called "The Elizabethan Period," and including Spenser, Bacon, Shakespeare, and their Contemporaries; (4.) From 1625 to 1688, or the Period of Milton and Dryden; (5.) From 1688 to 1789, or from Dryden to Cowper and Burns, called generally "The Eighteenth Century"; (6.) From 1789 to the present time, or from Wordsworth and Scott to Tennyson and Browning. Under each period there will be a synopsis of its principal poets and prose-authors; the lives and writings of the more important of these will be reviewed more at large; and the general aim will be to exhibit the successive movements and variations of our Language and Literature in their connexions with the course of our National and Social History.

III. Instruction in English Composition, &c. During part of the Session one of the meetings in each week will be devoted to practical work of various kinds, including brief written exercises to be done by the Students in the Class-room. Subjects will also be prescribed for more extensive Essays to be written at home. There will be Prizes for merit in Essay-writing, in addition to the general Class-Prizes.

Text Books and Books recommended.—Bain's "English Composition and Rhetoric"; Hodgson's "Errors in the Use of English"; Morley's "First Sketch of English Literature"; Chambers's "Cyclopædia of English Literature"; "Three Centuries of English Poetry"; Morris's "Historical Outlines of English Accidence"; Sweet's "Anglo-Saxon Reader."

VIII. HISTORY.

(See also under Faculty of Law.)

A Course of Twenty Lectures on the History and Constitution of the United States of America will be given on Mondays, Wednesdays, and Fridays, at 5 o'clock, beginning 16th October, provided a sufficient number of Students present themselves.

IX. PRACTICAL ASTRONOMY.

PROFESSOR COPELAND.

Lectures on Practical Astronomy, preceded by an introductory address, will be delivered on Tuesdays and Thursdays. Supplementary to these the Professor will afford instruction *gratis* to any members of the class in the use of portable and fixed astronomical instruments, at the Royal Observatory on Calton Hill, beginning at 8 P.M. on the same days of the week. In the practical lessons the requirements of the scientific traveller will be kept specially in view. In the course of the lectures the most desirable text-books will be indicated.

X. AGRICULTURE AND RURAL ECONOMY.

PROFESSOR WALLACE.

SCIENTIFIC PRACTICE.

1. *Definition of Agriculture*.—Aid given by the Allied Sciences.
2. *Surface Geology*.—Formation and Classification of Soils—their Physical and Chemical Properties. Importance of Organic Nitrogen. Indications of good or bad Soils—the different Methods of Management and Improvement.
3. *Drainage*.—Its Practice and Advantages—Irrigation—Wet-Warping—Mixing or Top-Dressing—Claying—Marling—Chalking—Liming—Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.
4. *Implements and Machines of the Farm*.—The Importance of their proper Construction and careful Management.
5. *Steam Cultivation*.—Its Advantages and Disadvantages.
6. *The Motive Powers Employed on the Farm*.—1st, Man ; 2d, Horse ; 3d, The Mechanical Powers (Water, Wind, and Steam)—their Comparative Values and Advantages.
7. *Farm Servants*.—Their Labour and Wages—Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour on different Classes of Farms.

8. *The Importance of Rotations.*—Different Rotations and reasons why they are adopted—Systems of Farming.

9. *Our Farm Crops* (including Grain, Root, Forage, and Hay Crops).—Their Selection and Cultivation. Insect Injuries and Diseases, and the best Means of Prevention.

10. *Identification of Grasses and other Valuable Pasture Plants.*—Character and Habits of those of importance—Detection of Adulterations of Seeds—Regulations necessary to protect the Farmer in buying Seeds.

11. *The Management of Permanent Pasture.*—Proper Methods of making new Pasture—its After-treatment.

12. *Weeds in Pastures* and Means of Destroying them.

13. *Silage and the System of Ensilage.*—Its Advantages, &c.—Its Suitability and Unsuitability according to Locality.

14. *Manures.*—Farm-yard Manure—its proper Mixing, Storing, and Application—its great advantage as a General Manure. Special Manures and so-called Artificials—their Uses, Abuses, and Adulterations—the proper Times and Methods of their Application. The Value of Liquid Manure and Town Sewage, and how to utilise them.

15. *Buildings and Fences.*—The proper Construction of Fences—the General Arrangement of Farm-Buildings—the best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c.—Covered Yards—Ventilation—Drainage.

16. *Live-Stock, embracing Cattle, Pigs, Horses, Sheep, Poultry.*—The Various Breeds of each, and suitability of some to Local Conditions—"The Principles of Breeding." Feeding and Management—Cost of Feeding—Proper Mixtures of Food to Use. Cost of the Production of a Stone of Beef, Mutton, and Pork, showing the Amount of Profit in each case.

17. *Dairying in all its Branches,* including the suitability or otherwise of surrounding Conditions—the proper Classes of Dairy Stock to keep, and their Management—the Treatment of Milk, and its Sale, or its Manufacture into Cheese, Butter, &c.

18. *Feeding Stuffs.*—Suitability of the Common Food Sub-

stances to the different Classes of Farm Stock—the Purchase, Storing, and Administration of the same—their Manurial Residues.

N.B.—The lectures dealing with Live Stock and Dairying are divided into two parts, and each part is given every alternate year.

Text-Books.—Wallace's "Farm Live Stock of Great Britain," M'Connell's "Note - Book of Agricultural Facts and Figures," J. B. Harris's "Cheese and Butter Making," Fream's "Elements of Agriculture," "Rothamsted Experiments," and "Soils and their Properties," and the books in "Bell's Agricultural Series."

Students are requested to consult with the Professor of Agriculture at the beginning of the Session as to the plan and arrangement of their work.

In connection with the Class there are, in addition to the Medal and First and Second Class Certificates, the Steven Scholarship of about £75 and the Vans Dunlop Scholarship of £100. Particulars will be found under *Scholarships* in the Faculty of Arts. The Highland and Agricultural Society of Scotland gives £10 to be spent on Books for Class Prizes. The Highland Society also offers five £20 Bursaries to Scotch students who pass a certain standard in a general education examination held usually in the end of October. Particulars may be learned from the Secretary, Highland and Agricultural Society, 3 George IV. Bridge.

Periodical Excursions will be made to some of the best Farms in the Lothians. A Medal is given to the student who writes the best report of the same.

COLLATERAL COURSE IN ECONOMICS.

Professor Nicholson will deliver, in alternate years, about twenty lectures on *Economics bearing on the Study of Agriculture*:—1. The Food Supply of the United Kingdom; 2. The Wages of Agricultural Labour; 3. The Profits of the Farmer; 4. The Rents of Land and Causes of Variations in Rents;

5. Contracts for the Hire of Land; 6. The Risks of Long Leases; 7. Compensation for Improvements; 8. Fixity of Tenure and its Effects; 9. The Prices of Agricultural Produce; 10. Foreign Competition; 11. Effects of the Appreciation of Gold and the Depreciation of Silver; 12. Effects of various Imperial and Local Taxes on Agriculture. Next course in Session 1892-93. (Fee one guinea.)

See also details of a prospective Course in Forestry, suitable for Agriculture Students.

XI. MUSIC.

PROFESSOR NIECKS.

A scheme for the institution of a Faculty of Music, and of a Curriculum leading to Graduation, having been framed by the Senatus, a Draft Ordinance instituting a Faculty of Music has been issued by the Universities Commissioners. Meanwhile the following courses will be given:—

Lectures and Theoretical and Practical Instruction will be given in the Winter Session of 1892-93:—

1. *History of Music*, from the beginning of the Christian Era to the present day. This class will meet once a week. Twenty lectures. Fee, one guinea.

2. *Harmony, Melody, and Rhythm*. Theory and Practice. This class will meet twice a week. After the first hour, Students may stay another hour, and work under the Professor's supervision. Forty lectures; eighty hours. Fee, three guineas.

3. *Formal and Æsthetical Analysis*. This class will meet once a week. Twenty lectures. Fee, one guinea.

4. Students attending Course No. 2, together with either Course No. 1 or Course No. 3, will be admitted to the remaining Course without payment of additional fee.

5. Students of Music, if not already matriculated, will be admitted to any or all of the above classes on payment of the Five Shillings University-Entrance Fee (instead of the £1 Matriculation Fee) in addition to the Class Fees.

These classes will qualify for Graduation in Music after the issue of the Music Ordinance, provided candidates comply with the regulations to be laid down by the Ordinance.

6. *Recitals* of various kinds, and lectures with musical illustrations, will be given from time to time. Those attending the Music Classes will have the privilege of free admission to these Recitals and Lectures.

The University Court has, on the recommendation of the Senatus, approved of the admission of women to the Music classes.

XII. SANSKRIT AND COMPARATIVE PHILOLOGY.

PROFESSOR EGGELING.

A.—SANSKRIT LANGUAGE AND LITERATURE.

1. *Junior Class*.—Grammar and Exercises. Easy Sanskrit Texts (from Lanman's Reader). Easy translations from English into Sanskrit.

2. *Senior Class*.—Repetition of Grammar. Translations from English into Sanskrit. Sanskrit Texts such as Kālidāsa's Raghuvansā or Sakuntalā; Mrichchhakatikā; Manu's Institutes of Law; selected Hymns of the Rigveda (Lanman's Reader).

The Course will also include a general view of the history of Sanskrit Literature.

B.—COMPARATIVE PHILOLOGY.

A course of lectures will be delivered on the principles of Indo-European Comparative Philology, and the history of Linguistic Studies: provided that a sufficient number of Students or Matriculated persons be willing to attend.

XIII. ENGINEERING.

PROFESSOR ARMSTRONG.

Winter Session.

I. CLASS OF ENGINEERING.—The Object of the Course will be to show the practical application of Science to some branches of Engineering. The Series of Lectures will form a Two Years'

Course, so arranged that Students can enter the Class at the beginning of either year. The following are the subdivisions of the subject matter of the complete Course, a part only of each subdivision being dealt with each year :—

1. Applied Mechanics ; 2. One Branch of Civil Engineering ; 3. One Branch of Mechanical Engineering ; 4. A Series of Examples of the Application of Machinery to Manufacturing Purposes.

Synopsis of the Lectures for the present Session :—

1. Principles of Statics ; couples ; moments of forces ; parallel and inclined forces ; centre of gravity ; moment of inertia ; friction.

2. Equilibrium and stability of frames, ribs, and linear arches.

3. Strength of materials : stretching, crushing, bending, and twisting.

4. Application of mechanical principles to combined structures, especially to roofs and bridges.

5. Earthwork and masonry ; retaining walls and masonry arches.

6. Principles of Kinetics. Newton's laws of motion. Conservation and transformation of energy.

7. Application of principles of Kinetics to prime movers ; especially to the steam engine.

8. Theory of heat engines.

11. Elements of machine design.

Four Examinations are held during the Session ; and each week, unless there be an Examination, exercises are given to be worked at home. The questions set are such as are met with in the practice of Engineering ; and the papers being returned to the Students, annotated and corrected, form a body of Examples for subsequent reference.

Engineering Works and Factories will be visited by the Class, under the guidance of the Professor.

II. CLASS OF GEOMETRICAL, MECHANICAL, AND ARCHITECTURAL DRAWING.—Students can attend this Class at any time between the hours of 10 A.M. and 2 P.M. each day. Work

will be examined and instructions given by the Professor at 10 A.M. At other times the Class will be in charge of an Assistant.

All Students are recommended to take the Classes in Engineering and Drawing together.

The Class in Drawing may also be attended with advantage by those who propose in subsequent years to attend the Class in Engineering, as it is of great importance that Students should be able to readily understand mechanical diagrams, and to apply the graphic methods of calculation frequently employed by Engineers.

Instruction is given in the elements of Geometrical Drawing, the making of figured sketches from actual measurements, and subsequently in the Design and preparation of Working Drawings of Structures and Machines.

III. ADDITIONAL COURSES.—Short courses of lectures on special subjects, treated in detail, will be given from time to time.

During the present Session there will be such a course of about twenty lectures, the subject of which will be duly announced.

IV. TUTORIAL CLASS.—A Tutorial Class, at which the questions proposed in the Weekly Exercises are discussed and explained, is held each week.

There is no extra Fee required for either of the foregoing (III. and IV.) from Students attending the Ordinary Class in Engineering (I.).

V. THE FULTON ENGINEERING LABORATORY.—In this Laboratory Students receive practical instruction in the processes employed by the Engineer in the experimental determination of the physical and economical constants of materials, machines, and prime movers, and in the practical application of electricity.

Summer Session.

V. ENGINEERING FIELD-WORK.—A course of Practical Instruction in Surveying, Levelling, Setting Out, and Calculation of Quantities, is given during the Summer Session.

The course consists of lectures, and of practical work, as

undertaken in the field and in the office, and occupies the whole of each day for about three weeks. The number of hours during which instruction is given, is thus made to correspond to an ordinary course extending over a much longer period.

Course of Study.

The following course of study is recommended :—

- 1st Year.*—Mathematics (1st Class), Geometrical Drawing, Chemistry, Engineering Field-Work, Geology (Summer Session).
2d Year.—Mathematics (2d Class), Natural Philosophy, Engineering, Mechanical Drawing.
3d Year.—Natural Philosophy (Advanced Class), Engineering and Drawing.

If the Student is sufficiently well prepared, some modification of the foregoing may be found desirable.

For particulars of Scholarships, &c., tenable in connection with the Department of Engineering, see SCHOLARSHIPS, (Arts, &c.).

A detailed Syllabus of the Lectures and Courses of Instruction in the Department of Engineering is issued annually, and may be had on application.

XIV. GEOLOGY AND MINERALOGY.

PROFESSOR JAMES GEIKIE.

Winter Course.

I. CLASS OF GEOLOGY AND MINERALOGY.—This Class meets on Monday, Wednesday, and Friday, at 4 o'clock. The Course embraces a system of instruction in the following subjects :—

1. *The History of Geology*—an outline of the growth of the science from the time of the early cosmogonies downwards.
2. *Dynamical Geology*—a discussion of the nature and causes of geological changes effected on the surface and within the interior of the earth.

3. *Mineralogy*—an account of the physical and chemical characters of minerals, and a description of some of the more important and typical species in the various mineral groups.

4. *Petrology*—a description of the various families of rocks.

5. *Structural Geology*—a description of the geological structure and relations of rock-masses to each other.

6. *Palæontological Geology*—an account of the nature and use of fossils in geological inquiry.

7. *Historical Geology*—the history of the successive geological periods.

8. *Physiographical Geology*—an inquiry into the origin of the present outlines of the earth's surface.

9. *Speculative Geology*—an inquiry into the present physical conditions of the crust and interior of the earth; the origin of the greater physical features of the earth's surface; and the causes which have induced changes of climate.

Text-Books—"Outlines of Geology," by the Professor (*Stanford*); Rutley's "Mineralogy" (*Murby's Science Class-books*); or Dana's "Manual of Mineralogy and Petrography." More detailed works of reference, most of which are in the College Reading-Room, are recommended for each branch of the lectures.

II. CLASS OF PRACTICAL MINERALOGY AND GEOLOGY.—This Class meets for one hour daily (3 to 4), except on Saturdays, under the superintendence of Professor Geikie. The course of instruction is as follows :—

1. *Blowpipe Analysis of Minerals.*

2. *Macroscopic and Microscopic Examination of Minerals and Rocks.*

Text-Books.—Various works of reference, most of which will be found in the College Reading-Room, are recommended.

This Class may be attended by Students who are not following the Course of Lectures on Geology and Mineralogy.

III. FIELD DEMONSTRATIONS.—Short excursions are made on Saturdays to places of geological interest in the neighbourhood of Edinburgh, when the Class Lectures are illustrated by demonstrations in the field, and practical instruction is given in Geological Surveying. At the close of the Session (usually in the last week of April) an excursion, extending over a week or thereabout, is made for the purpose of examining the structure of a more distant district.

These Field Demonstrations are open to Students attending either the Class Lectures or the Practical Class.

Adjoining the Geology Class-room there is a small museum exhibiting the characters of minerals and rocks, and the typical fossils of the different geological systems.

Summer Course.

The following subjects are dealt with in this Course :—

1. *Petrology*.—(The lectures are illustrated by demonstrations in the Laboratory and the Class Museum.)

2. *Palæontological Geology*.—(A collection of the typical fossils of the different formations occurring in Britain will be found in the Class Museum.)

3. *Structural Geology*.—Under this head *Dynamical Geology* is discussed in more or less detail.

4. *Geological Surveying*.

5. *Economic Geology: application of Geology to Mining, Engineering, Agriculture, Public Health, &c.*

6. *Physiographical Geology*.

Structural Geology and *Geological Surveying* form the principal portion of this Course, but no previous knowledge of Geology is required on the part of the student—the elementary principles upon which the science is based being set forth both in the lecture-room and the field. The Class meets on Mondays, Wednesdays, and Fridays at 4 o'clock, and a short series of practical lessons on the study of rocks will be given at the commencement of the Session on Tuesdays and Thursdays at the same hour. The Saturdays are devoted to field demonstrations, when the mode of geological mapping and section-drawing is explained and illustrated.

XV. COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

PROFESSOR NICHOLSON.

The Lectures will follow the order of arrangement of John Stuart Mill's *Principles of Political Economy*.

1. METHODS USED IN ECONOMIC SCIENCE.—Analysis of Fundamental Conceptions, Wealth, Capital, &c.

2. PRODUCTION OF WEALTH.—Division of Labour—Accumulation of Capital—Growth of Population.

3. DISTRIBUTION OF WEALTH.—Socialism—Land Tenure—Wages—Profits—Rent—Trade Unions.

4. VALUE.—Money—Inflations and Depressions of Trade—Commercial Crises—Banking—Free Trade—Foreign Exchanges—Stock Exchange.

5. ECONOMIC PROGRESS.—Effects of Progress on Value, and on the relative Distribution of Wealth.

6. PRINCIPLES OF THE LIMITS OF GOVERNMENT INTERFERENCE WITH INDUSTRY.—Direct and Indirect Taxation—Incidence of Taxes—National Debts—Contracts—Joint Stock Companies—Patents—Copyrights.

Although Mill will be used as text-book, references will be constantly given to previous writers, *e.g.*, Adam Smith and Ricardo, as well as to more recent writers, *e.g.*, Sidgwick, Walker, Jevons, Marshall, Bagehot, &c.

History.—One lecture a-week will be devoted to the Economic History of England. This course is not intended to give the history of the Theory of Political Economy, but to trace the principal facts and institutions in the material and social life of the English people from an economic standpoint, *e.g.*, Gilds, Feudal System, Land Tenures, Ecclesiastical Influence, Serfdom and the Poor, Forms and Amount of Wealth, Foreign and Internal Trade, &c.

Agriculture.—A course of about twenty lectures will be given, in alternate years, specially adapted for Students in Agriculture. Fee, One Guinea. (See AGRICULTURE.)

XVI. THEORY, ART, AND HISTORY OF EDUCATION.

PROFESSOR S. S. LAURIE.

A.—THEORY, OR SCIENCE, OF EDUCATION.

Introductory.

The End of Education generally. The relation of the School to this end.

Materials of Instruction conducive to the attainment of the end. Relative value of subjects. Distinction of Real and Formal.

Physiology and its Educational Lessons.

SCIENCE OF EDUCATION, *i.e.*,

Applied Psychology and Ethics.—I. The Psychology of Intelligence in its educational relations fully treated. Periods of Mental Growth. The Rules of the Art which the Science yields.

II. Psychology of the Ethical Nature of Man in its educational relations.

B.—ART OF EDUCATION.

I. *Intellectual.*

Rules of the Art; or Method.—Analytic exposition showing their derivation from the Science as above. Application of the Rules to teaching of—

- (1.) Real-Naturalistic subjects, *e.g.* Object-lessons, Elementary Science, Geography, &c.
- (2.) Real-Humanistic subjects, *e.g.* Language, Literature, Economics, History, &c.
- (3.) Formal subjects, *e.g.* Arithmetic, Geometry, Grammar.

Rules of the Art in Moral Training and Discipline. Motives—The Authority of the Teacher, its nature and conditions. Punishments, Rewards, &c., &c.

The Organisation of a School. Organisation of a State-system. The ideas governing Primary, Secondary, and Uni-

versity Instruction. The Manual and the Technical in Instruction. School appliances. The Manipulation of a Class.

C.—HISTORY OF EDUCATION AND OF THEORIES.

1. Education in China. 2. Education of the Hindu Races. 3. The Education of the Ancient Persians. 4. Education among the Egyptians and the Semitic Races. 5. Education among the Hellenic Races. The educational views of Plato and Aristotle. 6. Education among the Romans. 7. Detailed analysis and exposition of the Institutions of Quintilian. 8. Plutarch. 9. Survey of the History of Education from Constantine to the Revival of Letters. 10. Erasmus, Colet, Luther, Melancthon, and John Sturm. 11. Roger Ascham: Exposition of "The Scholemaster." 12. Lord Bacon. 13. Ratichius. 14. Comenius. *Realism and Utility as opposed to Humanism and Culture.* 15. Milton's Educational views. 16. Analysis and exposition of John Locke's "Thoughts on Education," and the "Conduct of the Human Understanding." 17. Rousseau, Basedow, and Campe. 18. Dr Andrew Bell and Joseph Lancaster. 19. Analysis and exposition of Pestalozzi. 20. Jacotot. 21. Fröbel. 22. Jean Paul Richter. 23. Diesterweg. 24. Dr Arnold. 25. Herbert Spencer and contemporary Realism.

Note.—The books to be thoroughly studied during the Session, apart from the Lectures, are *Comenius*, and the Professor's book on "Language and Linguistic Method." *Three written Examinations will be held during the Session, and Three Essays on educational method called for.*

PRACTICE IN TEACHING.—Arrangements are made for securing *Practice in Teaching* to the extent of the Government requirements. Fee for this, £1, 1s. Facilities are also given for visiting one or two of the principal schools, and acquiring a knowledge of their organization.

Books necessary.—The Professor's "Language and Linguistic Method." "Comenius' Life and Educational

Writings," by the Professor. *Books recommended:* Professor's Book on Primary Instruction, and Herbert Spencer on Education. John Locke's Thoughts on Education, and on the Conduct of the Understanding. Quick's Educational Biographies.

XVII. FINE ART.

PROFESSOR BALDWIN BROWN.

It is a provision of the new Ordinances for Graduation in Arts, that the Course delivered from the Chair of Fine Art shall qualify as an alternative subject for the M.A. degree. If these Ordinances come into force in the Winter Session 1892-3, a complete qualifying course will be given as sanctioned by the University Court. A syllabus of this course will be issued by the beginning of October.

In case the new Ordinances do not come into operation, the following will be the arrangements for the Session :—

A Course of forty lectures on *The Natural History of Art*, dealing with the general subject of the Fine Arts in their origin, history, and relation to human life as a whole, will be delivered on Tuesdays and Thursdays, at 5 P.M. The general treatment of the subject will follow the lines of the Professor's manual, "The Fine Arts," which will be used as a text-book for the lectures.

The Cousin Prize, £15, will be awarded for the best set of eight Essays on subjects treated of in the Lectures of the Session.

XVIII. CELTIC LANGUAGES AND LITERATURE.

PROFESSOR MACKINNON.

The class meets on five days in the week at 4 P.M. For Session 1892-93 the work of the class will be arranged as follows :—

1. Monday and Wednesday, Lectures on the Celtic Languages, Literature, and History.
2. Tuesday and Thursday, Reading and Exposition of Gaelic Poets and Prose Authors.

3. Friday, Reading of Old Gaelic and Manuscripts.

The Course of Lectures for 1892-93, which may be attended separately, will consist of two parts :—(1.) Gaelic Grammar. (2.) Gaelic Literature, History of (Old and Modern).

On Tuesdays the hour will be devoted mainly to Reading, and on Thursdays to Grammar and Composition.

On Fridays the Class will read old Gaelic and Manuscripts.

The Books recommended are—

1. In connection with the Lectures :—Zeuss's "Grammatica Celtica"; Curtius's "Greek Etymology"; Schleicher's "Comparative Grammar"; Brugmann's "Elements of the Comparative Grammar of the Indo-Germanic Languages"; Rhys's "Lectures on Welsh Philology"; O'Curry's MS. Materials of Irish History, and Manners and Customs of the Ancient Irish.
2. For Reading Class and Composition Text-Books :—Stewart's Gaelic Grammar; O'Donovan's Irish Grammar; Windisch's "Kurzgefasste Irische Grammatik"; Stokes's "Celtic Declension."

Several prizes will be offered for competition to Students of the Class.

A special prize will be given for the best Essay on Holy Scripture in the old Gaelic Church. The Essay to be given in by December 31st, 1892.

[In 1892-93 it is proposed to form an Advanced Class for the purpose of reading Old Gaelic Texts and MSS. This Class will meet on Tuesdays and Thursdays at 3 P.M.]

LECTURESHIPS.

GIFFORD LECTURES ON NATURAL THEOLOGY.

LECTURER—Professor OTTO PFLEIDERER, of Berlin University.

These Lectures were endowed by the late Adam Gifford, Senator of the College of Justice, "for promoting, advancing,

teaching, and diffusing the study of Natural Theology, in the widest sense of that term."

The Course will be delivered during the Session 1892-93.

FORESTRY.

LECTURER—Colonel F. BAILEY, R.E.

Class meets daily from 2 to 3. The following subjects will be treated in detail.

1. *Forest Botany*.—Tissues and organs of trees. Structure, properties, and identification of British timbers. Laws of growth.

2. *Sylviculture*.—Habit of trees and their behaviour towards light, heat, moisture, soil, climate, injuries, &c. The more important sylvicultural systems. Treatment of woods as regards establishing, thinning, and regenerating.

3. *Forest Pathology*.—Diseases due to fungi, soil, and atmospheric influences : their prevention and remedy.

4. *Forest Zoology*.—Mammals, birds, and insects, injurious to trees, and the means of preventing their attacks.

5. *Forest Utilization*.—Felling and transport of timber. Secondary forest produce.

6. *Forest Mensuration and Valuation*.—Measurement of felled and growing timber. Means of ascertaining annual, current, and periodic increments in trees and woods, as regards height, mass, section, diameter, quality, and value.

AGRICULTURAL ENTOMOLOGY.

Course of 20 Lectures, with Laboratory Demonstrations.

STEVEN LECTURER—DR W. FREAM, LL.D., B.SC. LOND.,
F.L.S., F.G.S., ETC.

(*Free to Present and Past Students of the Agricultural Class.*).

The position of Insects in the Animal Kingdom.

The morphology and physiology of Insects, particularly in so far as a knowledge of these can be turned to useful account in

baffling the attacks of insect pests. The structural modifications of the mouths, legs, and wings of Insects.

The life-history of insects.

Enunciation of the general principle that where the life-history involves a series or cycle of changes, the measures of suppression should be directed against the weakest link in the chain. Illustrations.

Methods of insect attack, and the enormous losses consequent thereon. Incidentally :—

- (a) The stage in the life-history of the insect at which it becomes actively injurious.
- (b) The period in the growth of the crop when insect injury begins, and the organs of the plant which are attacked.

Methods of *prevention* of insect attack, as distinguished from methods of *remedy*.

The *general* methods of prevention or remedy, as distinguished from the *special*. The former are, in the main, agricultural. The latter usually involve the application of specific insecticides, or the subjection of the crop to a course of treatment distinct from ordinary agricultural operations.

Insecticides : the composition and properties of the more important. The methods of application.

Mechanical appliances for the distribution of insecticides.

The inter-relationship of economic entomology and systematic botany.

The natural enemies of insects ; particularly (a) insectivorous mammals and birds, (b) other insects, (c) parasites.

The classification of insects, directed especially to the means of identifying injurious insects in the several stages of their life-history.

The characters of the natural orders of insects illustrated by genera which furnish destructive species.

Special discussion of the natural orders Coleoptera, Hymenoptera, Lepidoptera, Homoptera, and Diptera.

Convenient groupings of insects—

(a) According to the crop attacked.

(b) According to the mode of attack.

A detailed discussion of the chief insects injurious to cultivated plants and to farm live stock in Britain, with methods of prevention and remedy.

These insects include, *inter alia*—Wire-worms, weevils, turnip flies, bark beetles, thrips, saw flies, sirices, surface caterpillars, winter moths, codlin moths, goat moths, leopard moths, magpie moths, cabbage butterflies, aphides, scale insects, mangel flies, cabbage flies, onion flies, Hessian flies, wheat midges, gout flies, frit flies, celery flies, leather jackets, ox warble flies, sheep's nostril flies, gad flies.

Other pests, outside the class Insecta; such as millipedes, arachnids, eelworms.

The present position of agricultural entomology in Britain and other countries, and the remarkable advances which have been made in the study during the last decade.

The entire course of lectures is profusely illustrated by carefully prepared natural specimens, the characters of which are demonstrated to students by the Lecturer. The instruction is further facilitated by an unique set of specially prepared coloured diagrams, from the pencil of Miss Ormerod.

Graduation in Arts.¹

REGULATIONS OF THE UNIVERSITY OF EDINBURGH RELATIVE TO THE DEGREE OF MASTER OF ARTS (M.A.)

*(Applicable to all who have entered their Academical Course since
31st October 1861.)*

The Degree of Master of Arts admits to the General Council of the University, to professional Study for the Learned Professions, to the Army, &c. Under recent regulations, framed in virtue of the Education Act (1872), the Degree qualifies for Masterships of Public Schools, subject to an examination in the methods of instruction, and three months' attendance in a Public School for the practice of teaching.

I. The ordinary Course of Study necessary for the Degree of Master of Arts (except in the circumstances mentioned in the following Article) extends over FOUR WINTER SESSIONS, and includes attendance for *not less than two Sessions* on the Classes of Humanity (Latin), Greek, and Mathematics respectively; attendance for not less than one Session on the Classes of Logic and Metaphysics, Moral Philosophy, and Natural Philosophy respectively; and also attendance on the Class of Rhetoric and English Literature.

II. Any Student who, at the time of his Entrance to the University shall satisfy the Professors of the Faculty of Arts, on Examination, that he is qualified to attend the Higher Classes of Latin, Greek, or Mathematics, or any one of them, may be admitted to such Higher Class or Classes without having previously attended the Junior Class or Classes in the same department. When a Student has been thus considered by the Faculty of Arts to be qualified for admission to the Higher Classes both of LATIN and GREEK, without having previously attended the First or Junior Latin and Greek Classes, his Course of Study for the Degree of Master of Arts may be completed within THREE WINTER SESSIONS, instead of Four. And no Student who is thus qualified for admission to the Higher Class of LATIN and GREEK, or of MATHEMATICS, without having previously attended the First or Junior Class in the same department, is required to give attendance in Latin, Greek, or Mathematics respectively, for more than *one* Session, as a necessary part of the Course of Study for the Degree of Master of Arts.

III. In pursuing the Course of Study for the Degree of Master

¹ See notes 2, page 76, 1 and 2, page 77, and 2, page 78.

of Arts, no Student is permitted to pass from the Junior to the Higher Class, unless the Professor is satisfied of his fitness to enter the Higher Class.

IV. It is in the power of any Student, who has given attendance during one or more Sessions in any Scottish University, to complete his Course of Study, by giving attendance in the University of Edinburgh during the remaining Sessions of his Course; provided always that every such Student gives attendance in the University of *Edinburgh* during, at least, the *last Two Sessions* of his Course; and provided also that he produces, to the satisfaction of the Faculty of Arts of the University of Edinburgh, Class Certificates of his attendance at the former Scottish University—but he must be examined in all the three Departments necessary for the Degree of Master of Arts by the Examiners of the University of Edinburgh.

V. Candidates for the Degree of Master of Arts must be examined on all the subjects of instruction embraced in the above Course of Academical Study; and the examinations may be conducted wholly in writing or partly *viva voce*.

VI. Any Student who has completed his attendance on the Classes of

LATIN AND GREEK,

required in the prescribed Course of Study, may be examined on these Subjects, at any Examination for Degrees, although he may not have completed his attendance on the other Classes of the prescribed Course.

In like manner, any Student who has completed his attendance on the Classes of

LOGIC AND METAPHYSICS, MORAL PHILOSOPHY, AND RHETORIC AND ENGLISH LITERATURE,

may be examined on these Subjects, at any Examination for Degrees, although he may not have completed his attendance on the other Classes of the prescribed Course.

Also in like manner, any Student who has completed the attendance required in the prescribed Course of Study on the Classes of

MATHEMATICS AND NATURAL PHILOSOPHY,

may be examined on these subjects at any Examination for Degrees, although he may not have completed his attendance on the other Classes of the prescribed Course.

And if such Student shall satisfy the Examiners, when so examined, in the Department of CLASSICAL LITERATURE, which comprehends Latin and Greek—or in the Department of PHILOSOPHY, which comprehends Logic and Metaphysics, Moral Philosophy, and Rhetoric and English Literature—or in the Department of MATHEMATICS and PHYSICS, which comprehends pure Mathematics and Natural Philosophy, he shall receive from them a CERTIFICATE to that effect, and he shall not be examined again in the same Department, as a condition of his taking the Degree of Master of Arts.

VII. Students who have fulfilled the preceding conditions, and have passed the ordinary Examinations on the several subjects embraced in the prescribed Course of Study, are, after signing the *Sponsio Academica*, and on presenting themselves at the Public Ceremonial of Graduation in April, entitled to receive the Degree of Master of Arts; and their names are published in the UNIVERSITY CALENDAR, in alphabetical order, in the Graduation List.

VIII. At the Public Ceremonial of Graduation in Arts, held annually in April, the Degree of MASTER is conferred by the Chancellor or the Vice-Chancellor of the University, in name of the Senatus Academicus. Degrees are not conferred on any who are not present at the Graduation Ceremonial, and who have not signed the *Sponsio*, although they may have passed all their examinations. Those who are presented to receive the degree must appear in Academical costume, and with the hood proper to the Degree.¹

IX. Fees for Examination must be paid by Candidates in advance to the Chief Clerk of the University Court, when they intimate their names and addresses. [A fee of Half-a-Guinea will be payable by each Candidate before presenting himself for any Preliminary Examination in the University, when the new Ordinances come into operation.] The Examination fee for the Degree of Master of Arts is *Three Guineas*. The fee for Examination of each of the three Departments mentioned in Article VI. is *One Guinea*; and no further fee than the sum of *Three Guineas* is payable by any Candidate for admission to the Degree in Arts, whether with or without Honours.²

¹ Black silk lined with *white*.

² Immediately after obtaining the Degree, Candidates should apply for their Diplomas at the Matriculation office. There is no additional charge for the Diploma. Any Graduate who cannot apply personally is required to give written authority to some person to receive and give a receipt for it.

GRADUATION IN ARTS WITH HONOURS.¹

I. Students who have passed the Examinations in the three Departments embraced in the Course of Study prescribed for the Degree of Master of Arts, may, before taking the Degree, offer themselves for a further examination, with a view to Graduation with Honours; and that either in the same year in which they have completed the Pass or Ordinary Examinations, or in a future year. Also, any Student who desires to offer himself for Examination with a view to graduation with Honours, in any one or more departments, may proceed to such Honours Examination, after sufficient attendance on the classes in the department or departments in which he desires to offer himself, without having previously passed the Examination in such department or departments for the Degree of Master of Arts without Honours;² and if such Student, in the opinion of the Examiners, fails to attain the standard for Honours in any department, but attains to the standard of the Examination for graduation without Honours, he shall be held to have passed in that Department for the Degree of Master of Arts, without Honours; but if, in any such department, he fails to attain to the standard of the Examination for graduation without Honours he shall not be entitled, until he shall have passed in that department, to the Degree of Master of Arts. And no person, without the permission of the Senatus Academicus, can be admitted to an Examination for *Honours*, after he has ceased, for more than one Winter Session, to be a Matriculated Student, in attendance on a class or classes in the University.

II. There are four departments for Graduation in Arts with Honours, in any one or more of which, subject to the preceding Regulation, Students may present themselves for further Examination, viz. :—

A. CLASSICAL LITERATURE,	.		{ Latin.
			{ Greek.
B. PHILOSOPHY,	.	.	{ Logic.
			{ Metaphysics.
			{ Moral Philosophy.
C. MATHEMATICS AND PHYSICS,			{ Pure Mathematics.
			{ Natural Philosophy.

¹ See Ordinance Sections XI. to XV. and XXI. to XXXII. inclusively, Appendix pages 26 and 29.

² In the Department of Philosophy, however, the Candidate must pass the Examination for the Ordinary Degree in English, there being no Honours Examination in that subject.

D. NATURAL SCIENCE, . . .	{ Geology. Zoology. Chemistry. Botany.
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III. In each of the first three of the above-mentioned departments, viz., in Classical Literature, in Philosophy, and in Mathematics, there are *two* Grades of Honour, each representing, as nearly as possible, a uniform standard of qualification, and denominated respectively the FIRST CLASS and the SECOND CLASS. The names of candidates entitled to Honours, in each of these classes, are arranged in alphabetical order.

IV. In the department of Natural Science, there is only *one* class for Honours; and the names of candidates entitled to Honours in that class are arranged in alphabetical order.

V. The names of candidates to whom the Examiners award a First or Second Class in the Examination for Honours are retained in the UNIVERSITY CALENDAR, in the Class Lists, under the year in which the Honours were taken by them, and in the department or departments in which they were so classed.

ENTRANCE EXAMINATION FOR CURRICULUM OF THREE SESSIONS—SESSION 1892-93.^{1, 2}

In terms of *Regulation* II. (see p. 109), Entrance Examinations will be held by the Faculty of Arts in the *Examination Hall* of the University, on *Saturday, the 15th of October 1892*, at *Nine o'clock*, at which time Students entering their *First Session* in the Faculty of Arts, who desire to be enabled to complete their Curriculum in Arts within Three Winter Sessions,³ must present themselves for examination. At these Examinations they will be asked to translate—

1. One or more easy passages from Cicero, Livy, Virgil, or Horace, into English;
2. A passage of plain English into Latin;
3. An easy passage (or passages), prose or verse, *e.g.*, from Xenophon, Plato, Lucian, Homer, or a tragedian, for translation into English;
4. A few easy sentences from English into Greek.

¹ See new Ordinance, Section XXVIII.

² Any alterations on the dates of Examinations, consequent on the passing of the new Ordinance, will be afterwards intimated.

³ See new Ordinance, Section II.

Some questions will be added in Greek Accidence and Elementary Syntax.

N.B.—Great stress will be laid on grammatical accuracy in the translation from English into Latin Prose.

The above Examination in Latin and Greek is the only one necessary for admission to a Three Sessions' Curriculum.

*The Senior Local Examinations Certificates of Edinburgh, Glasgow, Aberdeen, St Andrews, Oxford, and Cambridge; Royal University of Ireland Pass with Honours; and the Honours and Higher Grade Schools Leaving Certificate of the Scotch Department, are accepted pro tanto as qualifying for a Three Years' Curriculum.*¹

ENTRANCE EXAMINATION IN MATHEMATICS.² 3

Students at the commencement of the *First* Session of their attendance at the University who desire, with a view to a Degree, to attend the SECOND Mathematics Class, without attending the First, will be examined on *Monday, the 17th of October*, at *Nine o'clock*.

The subjects of Examination will be—Arithmetic; Euclid, Books i., ii., iii., iv., and vi., or their equivalent; Elementary Algebra and Trigonometry. In the examination in Geometry the questions will be set so as to allow freedom of teaching as far as possible. More stress will be put upon accurate knowledge of Geometrical principles, and ability to apply them in simple exercises, than upon the reproduction of demonstrations according to Euclid's or any other special text.

* * Specimens of the Entrance Examination Papers for 1891 in Latin, Greek, and Mathematics are given at page 144.

The following Examinations will exempt from one Session's attendance on the Class of Mathematics, viz.:

The Senior Local Examinations Certificates of Edinburgh, Glasgow, Aberdeen, St Andrews, Oxford, and Cambridge; the Junior Local Examinations of Oxford, and Cambridge, provided that in each case the Candidates have taken the whole Examination in Euclid, Algebra, and Trigonometry, and have not merely passed in the minimum standard; Royal University of Ireland Pass with Honours; the Intermediate Examination of the University of London; the Honours and Higher Grade⁴ Schools Leaving Certificate of the Scotch Department.

¹ See new Ordinance, Section V.

² See note 3, p. 113.

³ See note 2, p. 113.

⁴ See new Ordinance, Section V. Sub-Section (3).

N.B.—The names of those who have passed the Examination for the Three Sessions' Curriculum, or the Entrance Examination in Mathematics, or both, will be published in the UNIVERSITY CALENDAR, along with the names of the Schools from which they have come, provided that they have matriculated and enrolled in the Classes for Session 1892-93.

Matriculated Students who have passed either or both of these Examinations, or the equivalent Examinations elsewhere, will obtain the necessary Certificates to that effect in November by applying to the Dean of the Faculty of Arts.

PASS EXAMINATIONS FOR MASTER OF ARTS.^{1 2}

PROGRAMME FOR OCTOBER 1892 AND APRIL 1893.

Pass Examinations for the Degree of Master of Arts² will be held in the *Examination Hall* of the University in *October* 1892, on the four following days, viz., Tuesday the 11th, Wednesday the 12th, Thursday the 13th, and Friday the 14th. The Examinations will be conducted in the following order:—

First Day, Tuesday, 11th October.—Latin (9 to 11 and 11.30 to 1.30); Mathematics (2.30 to 4.30).

Second Day, Wednesday, 12th October.—Mathematics (9 to 11); Greek (11.30 to 1.30 and 2.30 to 4.30).

Third Day, Thursday, 13th October.—Logic and Psychology (9 to 12); Natural Philosophy (1 to 4).

Fourth Day, Friday, 14th October.—Moral Philosophy (9 to 12); Rhetoric and English Literature (1 to 4).

Pass Examinations for the Degree of Master of Arts² will also take place in *April* 1893, on the four following days, viz., Monday the 3rd, Tuesday the 4th, Wednesday the 5th, and Thursday the 6th. The Examinations will be conducted in the following order:—

First Day, Monday, 3rd April.—Latin (9 to 11 and 11.30 to 1.30); Mathematics (3 to 5).

Second Day, Tuesday, 4th April.—Mathematics (9 to 11); Greek (11.30 to 1.30 and 2.30 to 4.30).

Third Day, Wednesday, 5th April.—Logic and Psychology (9 to 12); Natural Philosophy (1 to 4).

¹ See note 2, p. 77.

² See note 2, p. 113.

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Fourth Day, Thursday, 6th April.—Moral Philosophy (9 to 12); Rhetoric and English Literature (1 to 4).

The subjects for the Pass Examinations in October 1892 and in April 1893, are as follows :—

A.—DEPARTMENT OF CLASSICAL LITERATURE.

Latin.

Horace, *Epistles*, i., ii. (not including *Ars Poetica*); *Odes*, iii., iv.

Virgil, *Eclogues*; *Georgics*, i. ii.

Cicero, *Pro Murena*.

Tacitus, *Historics*, i.

A passage from a Latin Author not prescribed.

Latin prose composition.

Roman History.—A general knowledge of Roman history to the death of Augustus, and a special knowledge of the period from B.C. 146 to B.C. 60.

Roman Literature.—A general knowledge of the course of Roman Literature till the end of the Augustan age, and a more special knowledge of the Lives and Works of Virgil, Horace, Cicero, and Tacitus.

Translation from English into Latin prose is required of every Candidate.

Greek.

Homer, *Odyssey*, Book xxii.

Euripides, *Helena*.

Thucydides, Book iii.

Demosthenes, *Against Androtion*. (Wayte's edition recommended.)

A passage from a Greek Author not prescribed.

Greek prose composition.

Greek History.—A general knowledge of Greek History to the death of Alexander, and a more special knowledge of the period embraced by the Peloponnesian War.

Greek Literature.—A general knowledge of the course of Greek Literature, and a special knowledge of the prescribed Authors.

Laws of Hexameter and Iambic verse.

B.—DEPARTMENT OF PHILOSOPHY.

Logic and Psychology.

The elementary doctrines of Logic and Psychology.

Davidson's *Logic of Definition*, chapters i., ii., iii., and vi., vii., viii., ix.

Locke's *Essay*, Book ii., Chapters 1-12, and Chapter 23, along with "*Locke*," in "*Philosophical Classics*" (Blackwood); "*Selections from Berkeley*" (fourth edition),—"Editor's Introduction," (pp. ix. to liii.); "*Principles of Human Knowledge*" (Part I. sect. 1-84, pp. 37-101); "*Divine Visual Language: A Dialogue*," pp. 249-296; Prefatory Notes (pp. 3-7; 159-166), and the footnotes.

Moral Philosophy.

The Class Lectures—"Handbook of Moral Philosophy;" Mills' "*Utilitarianism*;" Sidgwick's "*Outlines of the History of Ethics*," Chapters ii. and iv.

Rhetoric and English Literature.

The Principles of English Composition and Style: Class Lectures.

History of the English Language: The First Five Chapters of Morris's "*Historical Outlines of English Accidence*."

History of English Literature, more particularly from 1350 to 1688: Lectures, with Morley's Text Book, and the portions of Hallam's "*Literature of Europe*" that relate to English writers of the time mentioned.

Special Readings required:—

Shakespeare's *Midsummer-Night's Dream* and *King Lear*.

Milton's *Sonnets* and his *Paradise Regained*.

De Quincey's Essay entitled "*Rhetoric*," and Ascham's *Scholemaster*.

Wordsworth's *Prose Prefaces*, &c., to his *Poems*, with Book I. of his *Excursion*.

C.—DEPARTMENT OF MATHEMATICS AND PHYSICS.

Mathematics.

Arithmetic.

Euclid, Books i., ii., iii., iv., vi., and xi., or their equivalent, with their application to Mensuration.

Algebra, Trigonometry, Conic Sections, Geometrical and Analytical.

Candidates must show sufficient knowledge in each of the subjects of examination.

Natural Philosophy.

Elementary Dynamics.

Astronomy and Experimental Physics.

Candidates must show sufficient knowledge both of Dynamics and of Experimental Physics.

The names and addresses of Candidates for the Degree of Master of Arts, or for Certificates in any of the three departments, who intend to present themselves for examination in October 1892, must be given in at the *Matriculation Office* not later than the 3rd of October; and for the Examinations in April 1893, not later than the 17th of March. The Graduation Fee (if not previously paid) must be paid when the Candidate announces his name.¹ Candidates must at the same time state the Department or Departments (if any) which they have already passed.

In making this announcement in *October*, Candidates must present, at the *Matriculation Office*, their Matriculation Cards, with the relative Class Certificates, and Certificates for a Three Sessions' Curriculum, required in the Department or Departments for which they enter their names. For the Examinations in *April* 1893, the Matriculation Cards and Certificates must be shown *on or before 1 p.m. on Saturday, the 1st of April*. When the Candidate has exhibited all his Matriculation Tickets and Certificates, the Clerk will stamp on his Receipt, "Certificates examined," which will entitle him to admission to the examination, on producing his Receipt at the Examination Hall.

Candidates who have, in a former year, passed all the examinations necessary for Graduation, but without having taken the Degree, and who desire to present themselves for Graduation in April 1893, must, *at least ten days previously*, enter their names and addresses, and show their Departmental Certificates, at the *Matriculation Office*.

Candidates who have passed all the Departments for the Degree of M.A., but who do not desire to graduate in April, may have their names printed in the Pass Lists,—provided they enter their names and exhibit their Departmental Certificates at the *Matriculation Office* at least one clear day before the date of Graduation; and in like manner, those who complete their Examinations in October may have their names inserted in the printed Pass Lists in October,—provided they enter their names and show their three Departmental Certificates within one day after the announcement of the results of the Examinations has been posted on the Boards at the University.

Candidates for Examination in any Department, or for

¹ When names are not entered nor fees paid on or before the stated dates, an additional or late entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his Name is entered, the Fee paid, and all the necessary Certificates, &c., lodged.

Graduation, must be Matriculated Students of the year in which they appear for Examination or for Graduation.

Every Candidate for Graduation is required to exhibit his Departmental Certificates, and to pay the Fee of £1 for Registration as a Member of the General Council, before he can be presented for Graduation, which should be done at least one clear day before the date of Graduation.

The fees for Matriculation, for Examinations for Degrees, and for Registration of Graduates as Members of the General Council, are payable at the Matriculation Office, University. When Candidates cannot attend personally to pay the fees, they should transmit them by crossed *Post Office* or *Postal Orders*, or by *Bank Drafts only*, and not by cheques on private accounts, to the *Chief Clerk of the University Court*, who is alone authorised to receive the fees and grant receipts.

EXAMINATIONS FOR GRADUATION IN ARTS WITH HONOURS.¹

(Examinations for Honours are held in April only.)

PROGRAMME FOR APRIL 1893.

The Examinations for Honours will begin on Friday, 7th April 1893.²

The Examinations will be conducted in the following order:—

CLASSICAL LITERATURE.	{ Latin, 7 April, 9 to 12, and 1 to 4; 8 April, 9 to 12. Greek, 8 April, 1 to 4; 10 April, 9 to 12, and 1 to 4.
PHILOSOPHY.	{ Logic and Metaphysics, 7 April, 9 to 12, and 1 to 4; 9 April, 9 to 12. Moral Philosophy, 8 April, 1 to 4; 10 April, 9 to 12, and 1 to 4.
MATHEMATICS AND PHYSICS.	{ Mathematics, 7 April, 9 to 12, and 1 to 4. Natural Philosophy, 8 April, 9 to 12, and 1 to 4.
NATURAL SCIENCE.	{ 25 and 26 July 1892, and 20 and 21 March 1893.

¹ See new Ordinance, Sections XI.-XV., and XXI. to XXXII. inclusive.

² See Note 2, p. 113.

The subjects of Examination are as follows :—

A.—DEPARTMENT OF CLASSICAL LITERATURE.

Latin.

Plautus, *Mostellaria*, *Rudens*.

Lucretius, v.

Vergil, *Aeneid*, iv., v., vi., vii.

Horace, *Odes*.

Propertius (Postgate's selections, *Macmillan*).

Juvenal, with omission of ii., vi., ix.

Cicero, *de Oratore*, i., ii.

Tacitus, *Histories*, i., ii., iii., iv.

Latin prose composition, and translation from Authors not prescribed.

Roman History.—A general knowledge of Roman History to the end of the first century A.D., and a more minute knowledge of the period from B.C. 494 to B.C. 339.

Roman Literature.—A general knowledge of the course of Roman Literature, and a more minute knowledge of the Authors prescribed.

Greek.

Homer, *Odyssey* (xiii.-xxiv.).

Pindar, *Nemean* and *Isthmian Odes*.

Aeschylus, *Thebans* and *Persians*.

Plato, *Phaedo*.

Aristotle, *Nic. Ethics*, i.-iv. (inclusive), and x.

Greek Prose Composition.

Translation from Authors not prescribed.

Greek History.—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian constitution.

Greek Literature.—A general knowledge of the course of Greek Literature, and a more minute knowledge of the Authors prescribed.

Greek Grammar.—As a special subject *Monro's* Homeric Grammar. The principles of Comparative Philology as applied to Latin and Greek. Text-book recommended, "Sounds and Inflexions in Greek and Latin," by King and Cookson.

B.—DEPARTMENT OF PHILOSOPHY.

Logic and Metaphysics.

The more advanced doctrines of Logic and Psychology.

A competent knowledge of the History of Philosophy.

Plato, *Theætetus*.

Aristotle, *Metaphysics*, Book i.

Descartes, *Meditations*.

Locke, *Essay on Human Understanding*, in connection with "*Locke*" in "*Philosophical Classics*" (Blackwood).

Berkeley, in "*Philosophical Classics*" (Blackwood); also "*Selections from Berkeley*" (fourth edition).

Hume, *Treatise on Human Nature*, Book i. (Of the Understanding).

Kant, *Critique of Pure Reason*.

Hegel, in "*Philosophical Classics*" (Blackwood), and Professor Seth's *Hegelianism and Personality*.

Moral Philosophy.

The Class Lectures for Advanced Students.

Plato's *Protagoras*.

Plato, *Republic*.

Aristotle, *Ethics* (omitting v., vi., vii.)

Spinoza, *Ethics*, Parts iii., iv., v.

Hegel's *Philosophy of the State* (Grigg's German Philosophical Classics).

Reid's *Active Powers*, Essays ii., iv., v.

Kant, *Groundwork* (or *Fundamental Principles*) of the *Metaphysic of Ethics*.

Sidgwick's *Methods of Ethics* Books iii. and iv.

Green's *Prolegomena of Ethics*, Books ii. and iii.

Herbert Spencer's *Justice*.

C.—DEPARTMENT OF MATHEMATICS AND PHYSICS.

Pure Geometry, Algebra, Theory of Equations, including Determinants, Trigonometry (Plane and Spherical), Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. (The Candidate may, if he please, profess the Elements of Quaternion Analysis.)

Experimental Physics; Analytical Dynamics and Thermodynamics; *imperative*.

In addition, two or more branches of Elementary Mathematical Physics (such as Geometrical or Physical Optics, Statical or Voltaic Electricity, Capillarity, &c.). These may be selected by the Candidate.

D.—DEPARTMENT OF NATURAL SCIENCE.¹

GEOLOGY.

ZOOLOGY.

CHEMISTRY.

BOTANY.

¹ Honours in Arts in the Department of Natural Science are not obtainable under the new Ordinance. Special Degrees in Science are to be conferred under the new Ordinance No. 12, Regulations for Degrees in Science, Appendix p. 30.

The Candidate may select any Two of the above Subjects, in which he will be subjected to examinations equivalent to those in the same subjects for the *Second B.Sc.* in Physical and Natural Science.

Candidates who propose to present themselves at the Examination for Honours in April 1893, in Sections A, B, and C, must enter their names and addresses at the *Matriculation Office*, not later than the 17th of March—specifying the Department or Departments for which they offer themselves, and Candidates for Honours in Section D, in July 1892, and in March 1893, are required to enter their names, and specify the subjects in which they offer themselves, on or before 18th July 1892, and 13th March 1893 respectively. They must be Matriculated Students of the year in which they present themselves for Examination or for Graduation, and must pay the Fee of £1 for Registration, as explained above.

No one who has ceased for more than one Winter Session to be a Matriculated Student in attendance on a class or classes in the University can be admitted to an Examination for *Honours* without permission of the *Senatus Academicus*.

SPONSIO ACADEMICA TO BE SIGNED BY GRADUATES IN ARTS.

Nos qui Nomina subsignamus Magisterii titulo jamjam donandi Spondemus nos in omni debitae gratitudinis officio erga Universitatem Academicam Edinburgensem ad extremum vitae halitum perseveraturos.

GRADUATES IN ARTS.

HONOUR LISTS—1888-1892.

The names of all Graduates in Arts with Honours previously to 1889 will be found in the List of Graduates of the University published in 1889.

The contractions Class., Phil., Math., and Nat. Sc., indicate the Departments of Classics, Philosophy, Mathematics, and Natural Science, respectively; and the Italic Numerals, i. and ii., indicate First and Second Class Honours respectively.

1888.

Class. i., Jas. Gilchrist Goold,
Geo. Smith, Alexander Douglas
Thomson.

Class. ii., George Millie Gibb,
Archibald Paterson.

Phil. i., William Ingram.

Phil. ii., Wm. Wallace Duncan
Campbell, John Dow Fisher Gil-
christ, George Currie Martin.

Math. i., Alex. Wilmer Duff, Jas.
Goodwillie, David Beveridge
Mair.

Nat. Sc., Charles Hogg, Robert
Murray Leslie, David Rankine,
William Lyall Wilson, Thomas
Winter.

1889.

Class. i., Patrick Duncan, Harry
Angus Alexander Kennedy,
Thomas Ross Mills, Jas. Cruick-
shank Smith, John Tennant.

Class. ii., Robert Alex. Falconer,
Alexander Harris Hutt.

Phil. i., Charles Mackinnon Dou-
glas, William George Smith.

Phil. ii., David Walton Vaughan.

Math. i., James Ireland Craig,
William Andrew Knowles, Jas.
Fairbairn M'Kean.

Nat. Sc., Alexander Bremner, John
Brown Clark, David Davidson,
John Melvin Lowson, Robert
Stewart M'Dougall, John Mach-
ray, John Hally Meikle, Harry
Fisher Menzies, Alexander Gor-
don Wallace, John Young.

1890.

Class. i., John MacLennan, James
Watt.

Class. ii., William Brereton Den-
nison, William Barron Steven-
son.

Phil. i., Andrew Nisbet Bogle,
Duncan Mackenzie, Thomas
Dixon Rutherford, James
Stewart.

Phil. ii., Henry Reynolds Brown,
William Elmslie Wilkie Brown
Dempster, Arthur Herbert Gray,
Walter Hardie.

Math. i., Charles Tweedie.

Nat. Sc., James Adamson, William
Lewis Martin, John Myles,
Andrew Robertson Wilson.

1891.

Class. ii., John Adam Norrie,
William Gibson Wedderspoon.

Phil. i., Henry Barker, John
Davidson, Walter Charles
Murray.

Phil. ii., Alexander Grieve, Wm.
Allan Neilson, Alexander Joseph
Pearse.

Math. i., John Forbes, Adam
Mitchell Hunter, William Ed-
ward Philip, William Leslie
Thomson, John Turner.

Nat. Sc., Robert Pollok, James
Rodger Watson.

1892.

Class. ii., Peter Campbell, William
Gracie, Hugh Ross Mackintosh.

Phil. i., Hugh Ross Mackintosh.

Phil. ii., Thomas Linton, William
Joseph Pennell.

Math. i., James Mitchell.

Math. ii., Alexander Campbell
Mackay.

In addition to the above, one Candidate passed the Examinations for First Class Honours in Classics in April 1892, one passed the Examinations for Second Class Honours in Classics, and one passed the Examinations for First Class Honours in Mathematics.

DEGREE OF MASTER OF ARTS (ORDINARY EXAMINATION).

1st August 1891.

George Bartlet Begg. | John Ronald Currie.
Donald Gunn.

28th November.

Donald Smith Cairns. | William Petrie Chalmers.
William E. G. Fisher.

12th December.

Robert Macaulay Smith.

30th January 1892.

Alexander Edward.

14th April.

Anderson, James Gibson	25	Hamilton, David Gordon
Bailey, Thomas Grahame		Henderson, George
Baird, John Alexander		Herdman, George Walker
Begg, Robert Burns		Hird, David
5 Bell, Alexander Claude Mont- gomerie		Hogg, David Nasmyth Clarke
Bennie, Robert	30	Ker, Laurence
Black, James		Laing, Alex. James Louttit
Black, Peter Sanderson		Landale, Wellwood Maxwell
Burnet, James		Lawson, David Duthie
10 Cairncross, James Stewart		Linton, John
Campbell, Charles	35	M'Callum, Alexander
Christie, John Aitken		Macdonald, Angus
Colville, William Robert		Macfie, Robert
Cooper, Charles		M'Intosh, Charles Douglas
15 Couper, William James		M'Intyre, James Lewis
Craig, Robert Smith	40	Mackintosh, John
Cunningham, Robert Young		Macleay, John James
Dewar, William Leslie		Macleod, James Cran
Fell, Wm. Pennycook		Masterson, John Aird
20 Fiddes, James		Matthew, Robert
Flett, David	45	Morton, Arthur Silver
Gilruth, James Davie		Munro, James Lorimer
Gourlie, Norman John Neil		Ness, Thomas Matheson
Graham, James		Oliver, Alexander Gibson
		Paterson, Thomas Buck

50	Peterson, Magnus Mann Fraser	Sturrock, Alexander Corsar
	Ramsay, Charles	Taylor, Herbert Francis Lech-
	Reid, William Somervail	mere
	Robson, John Alexander	Taylor, John Gillavray
	Robson, Robert George	Waterston, David
55	Ross, Brownlee John	65 Welsh, Robert
	Ross, Franklin	Westwater, Frank Danks
	Slight, James Duncan	Whyte, George Gillespie
	Smith, James	Wilson, Edward
	Stephen, William Anderson	69 Young, Thomas
60	Stuart, John Cuthbert	

In addition to the above, five Candidates passed the Ordinary Examinations in the three Departments, but without at present taking the Degree.

At the Examinations in October 1891, eighteen Candidates passed in the Department of Classical Literature, twelve in the Department of Mental Philosophy, and twenty-nine in the Department of Mathematics.

At the Examinations in April 1892, eighty-eight Candidates passed in the Department of Classical Literature, ninety-three in the Department of Philosophy, and sixty in the Department of Mathematics.

REGULATIONS FOR SCHOOLMASTER'S DIPLOMA.

1. Candidates for the Schoolmaster's Diploma must be graduates in Arts of a Scottish, English, or Irish University, or of some other University approved of by the Senatus and the University Court.

2. Each Candidate must have matriculated in the University for the year in which he presents himself for the Diploma.

3. Each Candidate must have attended the Class of the Theory, Art, and History of Education in the University.

4. Each Candidate must pass an Examination in the Theory, Art, and History of Education, to be conducted by the Professor of that subject, and an Examiner appointed by the University Court.

5. The subjects of Examination are announced annually in the *University Calendar*.

6. Each Candidate must give evidence either :—

(a.) That he has attended a Course of Practical Instruction in a Training College for Teachers ; or

(b.) That he possesses at least the Government qualification in the practice of teaching required of Graduates, and provided in the "Scottish Code."

7. Each Candidate must satisfy the University of his practical apti-

tude as a Teacher in some special Subject or Subjects in which he has received instruction in the University, or in any Institution recognised by the University as qualifying for Degrees.

8. Each successful Candidate will receive a Diploma signed by the Vice-Chancellor of the University, or, in his absence, by the Principal or the Senior Professor. The Diploma, which will be delivered at a public meeting for conferring Degrees, states the special subject or subjects in the teaching of which the Candidate has satisfied the University of his practical aptitude.

9. This Diploma is of two grades: one for Masters of Arts with Honours in any Department, specially qualifying them for Secondary Schoolmasterships; the other for those who have taken the ordinary Degree of M.A.

10. The Fee for the Diploma is £2, 2s.

The next Examination will take place on Saturday, 25th March 1893, at 10 o'clock, and Candidates are required to enter their names and pay the fee at the *Matriculation Office* on or before 17th March.

The subjects are:—*Theory and Art.*—Lectures of the Professor, Locke's "Thoughts" (Moral Training); Locke "On the Conduct of the Understanding;" "Language and Linguistic method in the School," by Professor Laurie; Comenius's "Great Didactic;" Milton's "Tractate on Education;" Quintilian's "Institutions," Books I. and II. as in the Professor's Lectures. *History.*—The Professor's Lectures; especially Hellenic and Roman Education; Quick's "Educational Biographies," the chapters on Pestalozzi and Fröbel.

A short thesis will be prescribed to be written in the Examination Room on a subject treated in one or other of the above books.

The Diploma has been conferred on the following Candidates:—

A.—GENERAL DIPLOMA AND DIPLOMA FOR SECONDARY SCHOOLS.

1890—Robert Stewart M'Dougall.

1891—Wm. Brereton Dennison, M.A.; Wm. Allan Neilson, M.A.

1892—John Edgar, B.A. (Oxon.)

B.—GENERAL DIPLOMA.

1888—D. Bogie, M.A.; J. S. Lawson, M.A.; C. H. Owen, M.A.

1889—Donald Brims, M.A.; Charles Smith, M.A.

1891—E. W. Hobbs, M.A.; D. M'Gregor, M.A.; E. Mitchell, M.A.

1892—Frederick Samuel Davies, B.A. (Lond.); John Brown Hamilton, M.A., B.D. (Glasg.); Thomas Miller Henry, M.A. (Edin.); James Livingston Linton, M.A. (Edin.); Edward Wilson, M.A. (Edin.).

REGULATIONS FOR CERTIFICATE OF
"LITERATE IN ARTS." (L.A.)

The following are the Regulations for this Certificate :—

1. The Certificate is open to persons who have been students in the Faculty of Arts for not less than Two Sessions ; and who have during that time given attendance on not less than five classes in the said Faculty, so as to include four at least of the seven subjects necessary for Graduation in Arts. Of these Sessions at least one, and of the necessary classes at least two, must have been in the University of Edinburgh.

2. The examinations for the Certificate, in the four (or five) subjects which are also necessary for the degree of Master of Arts, are the ordinary graduation examinations in Arts in such subjects ; and the examination in any subject not in the course of study necessary for the degree of Master of Arts is of a standard equivalent to that of the ordinary graduation examinations in Arts.

3. The examinations for the Certificate may be taken either at one or at two periods, at the option of the Candidate. When divided, the First examination must embrace at least two out of the five necessary subjects ; the Second examination must embrace the remaining subjects.

4. The fee for the Certificate of Literate in Arts is two guineas. When the five necessary subjects are all taken at one examination, in April or in October, the fee is £2, 2s. ; and when the examination is divided the fee is £1, 1s., on each of the two occasions.

The names and addresses of Candidates for the title of LITERATE IN ARTS who desire to be examined in *October* 1892 must be entered, the Matriculation Cards and Class Certificates shown, and the Fee paid, at the *Matriculation Office*, not later than the 3rd of October. Those who desire to be examined in *April* 1893 must enter their names not later than the 17th of March, when the Fee must be paid, and show the necessary Matriculation Cards and Class Certificates on or before 1st April. In entering their names, Candidates are required to mention the subjects on which they desire to be examined, and the subjects (if any) in which they have already passed, with the date of passing. When the Candidate has exhibited all his Matriculation Tickets and Certificates, the Clerk will stamp on his Receipt, "Certificates examined," which will entitle him to admission to the examination, on producing his Receipt at the Examination Hall.

The October and April Examinations for the certificate of L.A. will be held on the days and at the hours fixed for the ordinary examina-

tions for the degree of Master of Arts and by means of the same examination papers, in all the subjects for the title of L.A. that are also necessary for the degree of M.A.

The next Examination on Education will take place on Saturday, 25th March 1893, at 10 o'clock.

Those candidates who select the "Theory, History, and Art of Education" as one of their five subjects, will be examined on the Professor's Lectures, Comenius's Great Didactic, Milton's Tractate, and Locke's "Conduct of the Understanding."

1892. Daniel Munro.
David Farquharson.
James Moncrieff.

Arts Entrance Examinations.

The following have passed the Entrance Examination in Latin and Greek necessary for the Three Sessions Curriculum in Arts, October 1891:—

Theo. Robt. Wm. Armour, George Watson's College; Fred. A. Barnardo, George Watson's College; Robt. C. M. Bell, George Watson's College; S. R. Burnie, Royal High School, Edinburgh; James Goldie Burns, St John's Grammar School, Hamilton; John Dixon Comrie, George Watson's College; Murray Corson, George Watson's College; George A. Davidson, George Watson's College; Francis Dewar, Daniel Stewart's College; Charles Samuel Edgar, Ayr Academy; Arthur George Edie, Fettes College; James Ferrier, Daniel Stewart's College; John Gibson, George Watson's College; Arthur J. Gossip, George Watson's College; John Keddie Graham, Galashiels Academy; Thomas Hart, George Watson's College; William E. Hutchison, George Watson's College; Robert G. Jamieson, Royal High School, Edinburgh; William John Keith, Royal High School, Edinburgh; John Macaskill, George Watson's College; William M'Clymont, George Watson's College; Donald Macdonald, Grammar School, Aberdeen; Peter M'Gregor, Perth Academy; Theodore Charles Mackenzie, Royal High School, Edinburgh; John Melrose Macmillan, Edinburgh Institution; James Masson, George Watson's College; Thomas Scott Muir, Royal High School, Edinburgh; William Stuart Nicholson, Ayr Academy; A. Croom Paterson, George Watson's College; Charles Stuart Pennell, George Watson's College; Donald George Ross, Royal High School, Edinburgh; George R. T. Ross, Arbroath High School; Robert L. Ross, George Watson's College; James Forrester Sellar, George Watson's College; James Young Simpson, George Watson's College; F. Guthrie Smith, George Watson's College; John Thomson, George Watson's College; Donald B. Waters, George Watson's College; Robert Whyte, George Watson's College.

The following have passed in Latin only:—

David M'Crae Aitken, George Watson's College; John A. Clarke, Perth Academy; William Burns Duffus, George Watson's College; James Caldwell Fraser, George Watson's College; John Hyde, Lasswade Public School; Alexander J. M'Clymont, Daniel Stewart's College; James D. Macdonald, Raining's School, Inverness; Henry Macdonald, Leeston School, New Zealand; John M. A. Macmillan, George Watson's College; Wm. Ogilvy, Private Tuition; William M. Paul, Dollar Institution; Stanley M. Pritchard, George Watson's College.

The following have passed in Greek only :—

Edward Arthur Braine, Montrose Academy; William Hugh Hamilton, Edinburgh Institution; Colin C. Nicolas, Falcon Hall.

The following have passed in Mathematics :—

David M'Crae Aitken, George Watson's College; Theo. R. W. Armour, George Watson's College; Fred. A. Barnardo, George Watson's College; Robert C. M. Bell, George Watson's College; Edward A. Braine, Montrose Academy; John Dixon Comrie, George Watson's College; Murray Corson, George Watson's College; George A. Davidson, George Watson's College; George T. Davison, Science and Arts School, Newcastle; Francis Dewar, Daniel Stewart's College; A. Graham Donald, George Watson's College; A. Easson, Dunfermline High School; Charles Samuel Edgar, Ayr Academy; C. P. Edie, Wade Academy; Arthur George Edie, Fettes College; James Ferrier, Daniel Stewart's College; John Gibson, George Watson's College; John Keddie Graham, Galashiels Academy; Robert Gray, George Watson's College; Thomas Hart, George Watson's College; William John Keith, Royal High School, Edinburgh; John Macaskill, George Watson's College; William M'Clymont, Irvine Royal Academy; Donald Macdonald, Grammar School, Aberdeen; Peter M'Gregor, Perth Academy; James Masson, George Watson's College; G. H. Menzies, High School, Dunfermline; Thomas Scott Muir, Royal High School, Edinburgh; A. Croom Paterson, George Watson's College; Charles Stuart Pennell, George Watson's College; Donald George Ross, Royal High School, Edinburgh; George R. T. Ross, Arbroath High School; Robt. L. Ross, George Watson's College; James Young Simpson, George Watson's College; F. Guthrie Smith, George Watson's College; John Thomson, George Watson's College; Donald B. Waters, George Watson's College; Robert Whyte, George Watson's College.

Competitive Examinations for Bursaries in Arts.

HONOUR LIST.

October 1891.

The following Candidates, entitled to distinction, are arranged in the Order of Merit :—

I.—STUDENTS ENTERING FIRST SESSION.

(Subjects of Examination—Latin, Greek, Mathematics and English.)

- | | |
|--|--|
| 1. A Croom Paterson, George Watson's College. | 7. Robert C. M. Bell, George Watson's College. |
| 2. Robert Lindsay Ross, George Watson's College. | 8. Frederick A. Barnardo, George Watson's College. |
| 3. Peter M'Gregor, Perth Academy. | 9. Thomas Hart, George Watson's College. |
| 4. Charles Samuel Edgar, Ayr Academy. | 10. George A. Davidson, George Watson's College. |
| 5. Francis Dewar, Daniel Stewart's College. | 11. Charles Stuart Pennell, George Watson's College. |
| 6. William John Keith, Royal High School, Edinburgh. | |

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|---|--|
| 12. F. Guthrie Smith, George Watson's College. | 24. William Stuart Nicholson, Ayr Academy. |
| 13. Arthur George Edie, Fettes College. | 25. James Masson, George Watson's College. |
| 14. Robert Whyte, George Watson's College. | 25. George Robert Thomson Ross, High School, Arbroath. |
| 15. James Young Simpson, George Watson's College. | 27. Murray Corson, George Watson's College. |
| 16. William M'Clymont, George Watson's College. | 28. John Thomson, George Watson's College. |
| 17. Donald B. Waters, George Watson's College. | 29. Theodore R. W. Armour, George Watson's College. |
| 18. John Macaskill, George Watson's College. | 30. James Forrester Sellar, George Watson's College. |
| 19. Donald Macdonald, Grammar School, Aberdeen. | 31. John Gibson, George Watson's College. |
| 20. Donald George Ross, Royal High School, Edinburgh. | 32. John Dixon Comrie, George Watson's College. |
| 21. James Ferrier, Daniel Stewart's College. | 33. Edward Arthur Braine, Montrose Academy. |
| 22. William E. Hutchison, George Watson's College. | 34. John Keddie Graham, Galashiels Academy. |
| 23. Thomas Scott Muir, Royal High School, Edinburgh. | |

JOHN WELSH (THOMAS CARLYLE) CLASSICAL BURSARIES.

(Subjects of Examination—Latin, Greek, and English.)

- | | | |
|---|---|----------|
| 1. A Croom Paterson, George Watson's College. | 16. Donald Macdonald, Grammar School, Aberdeen. | } Equal. |
| 2. Robert L. Ross, George Watson's College. | 17. Arthur G. Edie, Fettes College. | |
| 3. Charles S. Edgar, Ayr Academy. | 18. William S. Nicolson, Ayr Academy. | |
| 4. Francis Dewar, Daniel Stewart's College. | 19. John Macaskill, George Watson's College. | } Equal. |
| 5. George A. Davidson, George Watson's College. | 20. William E. Hutchison, George Watson's Coll. | |
| 6. William J. Keith, Royal High School, Edinburgh. | 21. James Ferrier, Daniel Stewart's College. | |
| 7. Thomas Hart, George Watson's College. | 22. Donald B. Waters, George Watson's College. | |
| 8. Charles S. Pennell, George Watson's College. | 23. Donald G. Ross, Royal High School, Edinburgh. | |
| 9. Peter M'Gregor, Perth Academy. | 24. Thomas S. Muir, Royal High School, Edinburgh. | |
| 10. William M'Clymont, George Watson's College. | 25. George R. T. Ross, Arbroath High School. | |
| 11. Robert C. M. Bell, George Watson's College. | 26. James Masson, George Watson's College. | |
| 12. F. Guthrie Smith, George Watson's College. | 27. James F. Sellar, George Watson's College. | |
| 13. Frederick A. Barnardo, George Watson's College. | 28. Murray Corson, George Watson's College. | |
| 14. James Y. Simpson, George Watson's College. | 29. John Thomson, George Watson's College. | |
| 15. Robert Whyte, George Watson's College. | 30. Theodore R. W. Armour, George Watson's College. | |
| | 31. Robert G. Jamieson, Royal High School, Edinburgh. | |

JOHN WELSH (THOMAS CARLYLE) MATHEMATICAL BURSARIES.

(Subject—Mathematics, especially Pure Geometry.)

- | | | |
|--|---|----------|
| 1. Robert C. M. Bell, George Watson's College. | 4. Charles S. Edgar, Ayr Academy. | } Equal. |
| 2. Francis Dewar, Daniel Stewart's College. | 5. Donald B. Waters, Geo. Watson's College. | |
| 3. Frederick A. Barnardo, George Watson's College. | | |

GEORGE HERIOT BURSARIES.

(Subjects—1. Latin ; 2. Elementary Mathematics ; 3. English, and any two of the following :—4. Greek ; 5. French and German ; or 6. Higher Mathematics.)

- | | | |
|---|---|----------|
| 1. Robert S. C. M. Bell, George Watson's College. | 7. Donald Macdonald, Grammar School, Aberdeen. | } Equal. |
| 2. Charles S. Edgar, Ayr Academy. | 8. James Masson, George Watson's College. | |
| 3. Thomas Hart, George Watson's College. | 9. George R. T. Ross, Arbroath High School. | |
| 4. Charles Stuart Pennell, George Watson's College. | 10. Alexander J. M'Clymont, Daniel Stewart's College. | |
| 5. Donald B. Waters, George Watson's College. | 11. John Dixon Comrie, George Watson's College. | |
| 6. James Ferrier, Daniel Stewart's College. | | |

II.—STUDENTS ENTERING SECOND SESSION.

(Subjects—Latin, Greek, and Mathematics.)

William Wallace M'Kechnie.

III.—STUDENTS ENTERING THIRD SESSION.

(Subjects—Classics, Mathematics, and Logic, with Psychology.)

- | | | |
|---------------|-----------------|----------|
| T. W. Wilson. | W. G. Napier. | } Equal. |
| Hugh Gunn. | A. T. Lay. | |
| T. G. Bailey. | D. G. Hamilton. | |

Class Prize Lists

FACULTY OF ARTS.

WINTER SESSION, 1891-92.

I.—HUMANITY.

THIRD CLASS.

PRIZES.—1. R. P. Davidson, Wigtownshire, and R. G. M'Kerron, Kelso (*Medallists*)—equal ; 3. W. W. M'Kechnie, Edinburgh ; 4. H. P. Macmillan, Greenock.

FIRST-CLASS CERTIFICATES OF MERIT.—5. A. B. Macdonald, Cumnock ; 6. R. M. Samson, Cumnock ; 7. W. R. Henderson, Edinburgh ; 8. J. S. Smart, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—9. J. Mackenna, Dumfries ; 10. P. Campbell, Birmingham ; 11. J. Burnet, Edinburgh ; 12. W. Gracie, Dundee.

COMPOSITION PRIZES.—1. A. B. Macdonald and R. M. Samson—equal ; 3. W. Gracie.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. George D. Low, Edinburgh ; 2. R. Lindsay Ross, Edinburgh ; 3. William Mackenzie, Cromarty—(*Medallists*) ; 4. Ernest W. Franks, Yorkshire ; 5. Frank Dewar, Edinburgh ; 6. J. A. Macdonald, Leith ; 7. Charles S. Edgar, Ayr, and John Macaskill, Dingwall—equal ; 9. Peter MacGregor, Perth, and A. Croom Paterson, Edinburgh—equal ; 11. William J. Keith, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—12. James Y. Simpson, Edinburgh ; 13. C. S. Pennell, Edinburgh ; 14. W. J. Stuart, Edinburgh ; 15. Duncan M. Burden, Dundee ; 16. David J. Tweedie, Bo'ness ; 17. George Ednie, Edinburgh ; Robert Hutton, Kirkcaldy ; and J. B. MacOwan, Dunblane—equal ; 20. George A. Davidson, Edinburgh ; 21. James F. Ross, Montrose ; 22. David Connel, Burntisland ; 23. James B. Russell, Greenock ; 24. J. S. M'Inroy, Dundee ; 25. J. B. Penman, Stranraer ; 26. James Craig, Cramond Bridge ; 27. David Mekie, Edinburgh ; 28. G. M. Fairweather, Monifieth, and Hugh Mitchell, Campbeltown—equal ; 30. George R. T. Ross, Arbroath ; 31. D. B. Waters, Wick ; 32. John Rose, Nairn ; 33. W. E. Hutchison, Moffat, and T. C. Mackenzie, Edinburgh—equal ; 35. George P. Walker, Stow ; 36. Farquhar Macrae, Plocton, and James Wallace, Davidson's Mains—equal ; 38. Thomas S. Muir, Edinburgh ; 39. F. A. Barnardo, Edinburgh, and Alexander Cameron, Edinburgh—equal ; 41. Samuel Gray, Edinburgh ; 42. William M'Clymont, Edinburgh, and Drummond S. Ross, Dollar—equal ; 44. R. C. M. Bell, Edinburgh ; 45. John Yuill, Kirriemuir ; 46. E. F. Gibson, Edinburgh ; 47. Thomas Hart, Edinburgh ; 48. Donald G. Ross, Travancore ; 49. Robert Whyte, Edinburgh ; 50. Harry M'D. Ross, Inverness ; 51. Andrew Mutch, Tillicoultry, and F. Guthrie Smith, Edinburgh—equal.

LATIN PROSE COMPOSITION.—*Prizes*.—1. Charles S. Edgar, Ayr ; 2. A. Croom Paterson, Edinburgh, and W. J. Stuart, Edinburgh—equal ; 4. W. E. Hutchison, Moffat ; 5. R. Lindsay Ross, Edinburgh. *Honourable Mention*.—6. William J. Keith, Edinburgh ; 7. John Macaskill, Dingwall ; Peter MacGregor, Perth ; and George D. Low, Edinburgh—equal ; 10. D. B. Waters, Wick ; 11. Frank Dewar, Edinburgh ; 12. James Ferrier, Edinburgh.

ROMAN HISTORY.—*Prizes*.—1. William Mackenzie, Cromarty ; 2. E. W. Franks, Yorkshire, and Geo. D. Low, Edinburgh—equal. *Honourable Mention*.—4. C. S. Edgar, Ayr ; 5. David Connel,

Burntisland, and George Ednie, Edinburgh—equal; 7. Frank Dewar, Edinburgh, and A. Croom Paterson, Edinburgh—equal.

JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Edward Henderson, Dundee; 2. Alexander Easson, Dunfermline; 3. J. Melrose-Macmillan, Edinburgh—(*Medallists*); 4. William Berry, Edinburgh; 5. Charles S. Findlay, Thurso; 6. H. Wheeler-Robinson, Northampton; 7. Charles Robertson, Roxburghshire; 8. Andrew D. M'Ara, Edinburgh; 9. W. W. Smith, Dumfries; 10. James C. Cuthbert, Dundee, and R. C. Moir, Wick—equal.

SECOND-CLASS CERTIFICATES OF MERIT.—12. Colin C. Nicolas, Edinburgh; 13. Alexander Doull, Wick; 14. D. M. Aitken, Dalkeith; 15. Ernest F. Bashford, Portobello; 16. W. R. R. Macdonald, Tain; 17. John Keddie Graham, Galashiels; 18. William Anderson, Dysart; 19. John P. Murdoch, Dalkeith; 20. E. A. Braine, Dundee; 21. Alexander R. Yeoman, Lincolnshire; 22. John Hyde, Lasswade; 23. David Nelson, Edinburgh; 24. Andrew Young, Perth; 25. Ramsay Traquair, Edinburgh; 26. John Ewart, Dalbeattie; 27. W. H. Holdsworth, Lancashire; 28. Alexander M'Clymont, Edinburgh; 29. Thomas Tait, Edinburgh; 30. Harry Corsar, Arbroath; 31. John N. Jack, Ross-shire; 32. Davidson Strath, Crieff; 33. Henry S. Brockway, Blackheath; 34. William Ogilvie, Kirriemuir; 35. David G. Young, Perth; 36. David C. Spence, Leslie; 37. Thomas M. Callender, Wardie, and W. H. Hamilton, Kirknewton—equal; 39. William J. C. M'Intosh, Lochgelly; 40. Thos. C. Macaulay, Irvine; 41. Malcolm Campbell, Edinburgh; 42. Donald Martin, Crieff; 43. William Fowler, Hawick; 44. A. J. Baird, Edinburgh; 45. James Donaldson, Arbroath; 46. William Moncrieff, Perth; 47. Henry Macdonald, New Zealand.

LATIN PROSE COMPOSITION.—*Prizes*.—1. Edward Henderson, Dundee; 2. J. Melrose-Macmillan, Edinburgh; 3. Harry Corsar, Arbroath. *Honourable Mention*.—4. Ernest F. Bashford, Portobello, and E. A. Braine, Dundee—equal; 6. Alexander Easson, Dunfermline; 7. William Berry, Edinburgh; 8. Charles S. Findlay, Thurso; 9. A. R. Yeoman, Lincolnshire; 10. James C. Cuthbert, Dundee; 11. Andrew D. M'Ara, Edinburgh.

ROMAN HISTORY.—*Prize*.—1. H. Wheeler Robinson, Northampton. *Honourable Mention*.—2. Alexander Easson, Dunfermline; 3. Andrew D. M'Ara, Edinburgh, and J. Melrose-Macmillan, Edinburgh—equal; 5. William Berry, Edinburgh, and Edward Henderson, Dundee—equal; 7. E. A. Braine, Dundee; 8. Ernest F. Bashford, Portobello.

H. C. GOODHART, M.A., *Professor*.

II.—GREEK.

SENIOR CLASS.

PRIZES.—1. A. Croom Paterson, Edinburgh; 2. Charles S. Edgar, Edinburgh (*Medallists*); 3. W. J. Keith, Portobello; 4. Francis Dewar, Edinburgh, and J. A. Macdonald, Leith—equal; 6. R. Lindsay Ross, Edinburgh; 7. Peter Macgregor, Perth; 8. C. S. Pennell, Fifeshire; 9. John Macaskill, Dingwall; 10. G. A. Davidson, Edinburgh, and Wm. Mackenzie, Cromarty—equal; 12. James Y. Simpson, Edinburgh, and W. J. Stuart, Edinburgh—equal.

CERTIFICATES OF DISTINCTION.—14. D. B. Waters, Caithness; 15. E. W. Franks, Redcar; 16. D. M. Burdon, Dundee; 17. Hugh Mitchell, Campbeltown; 18. G. D. Low, Edinburgh; 19. David Mekie, Edinburgh; 20. R. Whyte, Edinburgh; 21. Wm. M'Clymont, Edinburgh; 22. James F. Ross, Montrose; 23. William Walker, Edinburgh; 24. G. R. T. Ross, Arbroath; 25. David Connel, Burntisland; 26. R. C. M. Bell, Edinburgh, and John Rose, Nairnshire—equal; 28. Donald G. Ross, Travancore; 29. F. Guthrie Smith, Edinburgh; 30. Fred. A. Barnardo, England; 31. Drummond S. Ross, Dollar; 32. Wm. E. Hutchison, Moffat; 33. Thomas Hart, Edinburgh; 34. J. B. M'Owan, Dunblane.

COMPOSITION PRIZE.—Charles S. Edgar.

HISTORY PRIZE.—William Mackenzie. *Honourably Mentioned*—1. Jas. A. Macdonald; 2. W. J. Keith, and A. Croom Paterson—equal.

LITERATURE PRIZE.—A. Croom Paterson. *Honourably Mentioned*.—Wm. Mackenzie; F. Dewar; C. S. Pennell.

JUNIOR CLASS.

PRIZES.—1. Alexander Easson, Dunfermline; 2. J. Melrose-Macmillan, Edinburgh (*Medallists*); 3. E. A. Braine, Forfarshire; 4. Wm. Anderson, Dysart; 5. Edward Henderson, Edinburgh; 6. H. Wheeler Robinson, Northampton; 7. C. S. Findlay, Thurso; 8. J. Keddie Graham, Edinburgh; 9. J. G. Burns, Lanarkshire; 10. J. P. Murdoch, Mid-Lothian; 11. John Ewart, Kirkcudbrightshire; 12. Wm. H. Hamilton, Kirknewton.

CERTIFICATES OF DISTINCTION.—13. A. J. M'Clymont, Edinburgh; 14. George Ednie, Edinburgh, and John Hyde, Roslin—equal; 16. D. M. Aitken, Mid-Lothian; 17. W. R. R. Macdonald, Tain; 18. Ramsay Traquair, Edinburgh; 19. James Caldwell Fraser, Eskbank; 20. W. H. Holdsworth, Burnley; 21. R. C. Moir, Wick; 22. James Blair, Edinburgh; 23. Alexander Doull, Wick; 24. A. J. Baird, Port-Glasgow; 25. A. R. Yeoman, Lincolnshire; 26. Wm. Wright Smith, Lochmaben.

COMPOSITION PRIZES.—1. J. Melrose-Macmillan; 2. E. A. Braine.

HISTORY PRIZE.—Wm. Wright Smith. *Honourably Mentioned*.—1. R. S. Hill, Fifeshire; 2. William Anderson and E. A. Braine—equal.

LITERATURE PRIZE.—George Ednie. *Honourably Mentioned*.—Wm. Anderson, and Daniel Cameron, Crieff.

GRAMMAR PRIZE.—William Rattray, Kirriemuir.

The Subject for Private Readings for the Winter Session 1892-3 will be "The Frogs" of Aristophanes (Merry's Edition).

S. H. BUTCHER, LL.D., *Professor*.

III.—MATHEMATICS.

JUNIOR CLASS.

PRIZES AND FIRST CLASS CERTIFICATES.—1. Andrew C. Smith, Dumfriesshire; 2. Samuel Milligan, Dumfriesshire (*Medallists*); 3. F. A. Barnardo, Edinburgh; 4. William J. Keith, Portobello; 5. G. A. Russell, Dundee, and A. R. Scott, Edinburgh—equal; 7. William Thomson, Edinburgh; 8. Alexander Bain, Lauder; 9. Robert Mackenzie, Bonar Bridge; 10. Harry MacD. Ross, Inverness; 11. J. M. Pryde, Fife; Donald G. Ross, Travancore; and W. J. Stuart, Edinburgh—equal.

SECOND CLASS CERTIFICATES.—James Black, Edinburgh; John A. Clark, Perth; J. M. Cowan, Mid-Lothian; John H. Gordon, Kirkcudbright; A. L. Graham, Renfrew; Alexander Gray, Lauder; J. W. Lowthian, North Shields; William Macalpine, Kilmarnock; John M. Macdonald, Inverness-shire; David Mekie, Edinburgh; J. H. Melville, Fife; Charles Menmuir, Arbroath; Drummond S. Ross, Dollar; W. A. Skinner, Lauder; John Tinlin, Edinburgh; Harry M. Willsher, London.

SENIOR CLASS.

PRIZES AND FIRST CLASS CERTIFICATES.—1. John A. Johnston, England; 2. J. F. Cameron, Perthshire (*Medallists*); 3. G. T. Davison, Newcastle-on-Tyne; 4. J. H. Henderson, Edinburgh; 5. A. G. Burgess, Wishaw; Thomas Pullar, Perth; and John Sutherland, Wick—equal; 8. H. A. Braine, Forfarshire, and Henry Herd, Leith—equal; 10. Alex. B. Macdonald, Old Cumnock; 11. T. W. Pickles, Yorkshire; 12. D. M. Aitken, Mid-Lothian; 13. P. S. Hardie, Edinburgh, and A. D. Russell, Edinburgh—equal; 15. A. E. Adams, Stirlingshire, and Jas. Adamson, Forfar—equal.

SECOND CLASS CERTIFICATE.—J. Gibson Anderson, India; E. M. Beilby, Edinburgh; James Blair, Edinburgh; William Brown, Trinidad; Hugh Gunn, Rogart; George Hart, Ayrshire; John Henderson, Roxburghshire; W. R. Henderson, Edinburgh; H. L. Jackson, Edinburgh; Hugh McCalman, Edinburgh; W. W.

M'Kechnie, Edinburgh; J. M. Robertson, South Queensferry; Edwin Rogerson, Banff; J. Keith Ross, Travancore; A. J. D. Smith, Darlington; Andrew Tweedie, Berwickshire; James Wood, Haddington.

ADVANCED CLASS.

PRIZE MEDAL AND FIRST-CLASS CERTIFICATE. — T. W. Wilson, Perth.

FIRST-CLASS CERTIFICATES.—A. F. Lay, Kelso; Robert Lees, Ayr; *Neil Macmichael, Argyle; G. L. Moffat, Edinburgh; W. G. Napier, Edinburgh; James Wood, Edinburgh.

*Attending for the second time, and therefore not eligible for a prize.

The NEWTON BURSARY in Senior Mathematics is awarded to G. T. Davison, and the Lapsed NEWTON BURSARY in Senior Mathematics to John Sutherland.

G. CHRYSTAL. LL.D., *Professor.*

IV.—LOGIC AND METAPHYSICS.

ADVANCED CLASS—METAPHYSICS.

PRIZES.—1. (*Bruce of Grangehill and Falkland Prize*)—Hugh R. Mackintosh, Ross-shire (*Medallist*); 2. Thomas Linton, Edinburgh; A. B. Macaulay, Ayrshire; William Mill, Edinburgh; and William F. Trotter, Leith—equal.

CERTIFICATE OF DISTINCTION.—W. J. Pennell, Fifeshire.

SPECIAL PRIZE.—Hans C. Hansen, Norway.

JUNIOR CLASS.

PRIZES.—1. J. B. Baillie, East Lothian; 2. C. W. Inglis Wardrop, West Calder; 3. James Drever, Orkney, and J. H. Henderson, Edinburgh—equal (*Medallists*); 5. James Mackenna, Dumfries; 6. John Stevenson, Kirkcudbright; 7. W. R. Henderson, Edinburgh; 8. J. F. Ross, Montrose; 9. A. C. Smith, Dumfriesshire; 10. Thomas Pullar, Perth, and Patrick S. Hardie, Edinburgh—equal; 12. Hugh M'Calman, Edinburgh; 13. Alexander MacLennan, Fortrose; 14. T. Graham Bailey, Edinburgh; G. R. T. Ross, Arbroath, and Hugh Gunn, Rogart—equal.

CERTIFICATES OF DISTINCTION.—17. W. S. Reid, Kilmarnock; 18. J. F. Cameron, Perthshire; 19. William Robb, Addiewell; 20. James Beattie, Roxburghshire; F. R. Mackenzie, Edinburgh; D. N. C. Hogg, Fifeshire; and George Swanson, Edinburgh—equal; 24. J. W. Lowthian, North Shields; W. F. Harvey, Travancore; and James Adamson, Forfar—equal; 27. George M'Dougall, Dumfriesshire, and J. R. Murdoch, Edinburgh—equal; 29. Charles Campbell, St Cyrus; 30. John Henderson, Roxburghshire; 31. J. Keith Ross, Travancore, and J. M. Robertson,

South Queensferry—equal; 33. William Macalpine, Edinburgh, and Farquhar Macrae, Plockton, Ross-shire—equal.

A. SETH, LL.D., *Professor.*

V.—MORAL PHILOSOPHY.

ADVANCED CLASS.

1. Hugh Ross Mackintosh, Paisley, and Alexander Beith Macaulay, Irvine—equal (*medals*); 2. George Henderson, Inverness-shire—*medal*.

HONOUR CERTIFICATES.—1. William Mill, Edinburgh; 2. W. J. Pennell, Fife; 3. William F. Trotter, Leith; 4. Charles Edward Stuart, Edinburgh; 5. John R. Brown, Brooklyn, U.S.A.; 6. David S. Crichton, Dundee. *Specially Commended for Essay*—Hans Christian Hansen, Bergen, Norway.

ORDINARY CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES. — 1. A. C. Montgomery Bell, Edinburgh; 2. Hugh Pattison Macmillan, Greenock; 3. Sydney Smith, Edinburgh—(*Medallists*); 4. W. J. Collier, Lerwick; William Maclusky, Hamilton; 6. R. Macfie, Whithorn; 7. H. W. Pullar, Perth, and W. R. Colville, London—equal; 9. Henry Herd, Leith; 10. Angus Macdonald, Edinburgh; 11. Leonard C. Scott, Edinburgh; 12. F. R. Mackenzie, Edinburgh.

FIRST-CLASS CERTIFICATES.—13. George Henderson, Dundee, and W. Smith, St Cyrus, Kincardineshire—equal; 15. R. P. Davidson, Wigtownshire; 16. T. Graham Bailey, Punjab, India; 17. D. N. C. Hogg, Fife; 18. William A. Thomson, Edinburgh, and F. D. Westwater, Fife—equal.

SECOND-CLASS CERTIFICATES.—20. Thomas W. Wilson, Perthshire; 21. James D. Gilruth, Arbroath; 22. R. M'Queen, Troon; 23. James M. Wallace, Dundee; 24. George Swanson, Edinburgh; 25. James Drever, Orkney, and Alexander S. Riach, Edinburgh—equal; 27. W. Watson, Kirkcudbright; 28. Charles Campbell, St Cyrus, Kincardineshire, and R. J. L. Laing, Edinburgh—equal; 30. R. D. Robertson, Edinburgh; 31. Laurence Ker, Leicester; 32. R. W. Buchanan, Edinburgh; 33. W. D. Ritchie, Edinburgh; 34. T. B. Paterson, Edinburgh; 35. James Wallace, Aberdeenshire; 36. D. G. Hamilton, Birkenhead; 37. R. J. Peat, Edinburgh; 38. William Darling, Edinburgh; 39. John A. Baird, Tranent; John J. M'Lean, Ardnamurchan; J. R. Murdoch, Edinburgh; and John Sutherland, Wick—equal; 43. David Waterston, Dundee; 44. David Ross, Perth.

SPECIAL STUDY OF KANT'S ETHICS.—1. Hugh Pattison Macmillan (*prize and medal*); 2. W. J. Collier and Sydney Smith—equal; 4. H. W. Pullar (*prizes*) 5. Henry Herd.

H. CALDERWOOD, LL.D., *Professor.*

VI.—NATURAL PHILOSOPHY.

JUNIOR DIVISION.

PRIZEMEN AND FIRST-CLASS CERTIFICATES.—1. J. F. Cameron, Perthshire; 2. T. Pullar, Perth; 3. J. H. Henderson, Edinburgh (*Medallists*); 4. G. T. Davison, Newcastle-on-Tyne, and T. W. Pickles, Yorkshire—equal; 6. H. A. Braine, Forfar; J. Johnston, England; and J. Paterson, Edinburgh—equal; 9. S. Simpson, Orkney; 10. H. Herd, Mid-Lothian, and J. Stevenson, Kirkcudbright—equal; 12. J. A. Murray, Stirlingshire; 13. J. Graham, Edinburgh, and H. J. C. Kinghorn, Leith—equal; 15. H. L. Jackson, Edinburgh, and J. W. Paterson, Biggar—equal; 17. J. G. Anderson, India; A. M'Donald, Old Cumnock; and A. F. Watson, Edinburgh—equal; 20. E. M. Beilby, Edinburgh; 21. J. M. Robertson, South Queensferry; 22. W. Smith, Kincardine.

SECOND-CLASS CERTIFICATES.—23. W. Harvey, India; 24. A. Baird, Edinburgh, and J. Sutherland, Caithness—equal; 26. W. Henderson, Edinburgh; 27. E. Rogerson, Banff; 28. J. G. Anderson, Perthshire, and A. G. Burgess, Lanark—equal; 30. A. D. Russell, Edinburgh; 31. G. S. Dalgleish, Mid-Lothian; 32. J. Blair, Edinburgh; 33. G. Burns, Edinburgh, and J. Mann, Scotland—equal; 35. J. Adamson, Forfar; J. Henderson, Mid-Lothian; A. MacLennan, Ross; and A. Mitchell, Lanark—equal; 39. R. Blackstock, Fife; H. G. Walker, Fifeshire; and F. D. Westwater, Scotland—equal; 42. M. Mills, Edinburgh; G. A. Ross, Edinburgh; and W. Carlyle Wilson, Crieff—equal; 45. J. B. Baillie, East Lothian; J. Black, Edinburgh; T. M. Duncan, Fife; and W. W. M'Kechnie, Edinburgh—equal.

FORTNIGHTLY EXAMINATION.—1. J. H. Henderson and J. Johnston—equal (*Prizemen*); 3. J. F. Cameron; 4. G. T. Davison; 5. H. A. Braine and J. A. Murray—equal; 7. T. W. Pickles, T. Pullar, and H. Walker—equal; 10. G. Burns; 11. J. Graham; 12. A. F. Watson; 13. J. Paterson and S. Simpson—equal; 15. W. Harvey and J. Stevenson—equal; 17. H. J. C. Kinghorn; 18. G. M. Beilby and J. Robertson—equal.

SENIOR DIVISION.

PRIZE AND FIRST-CLASS CERTIFICATE.—1. H. Walker.

ADVANCED CLASS.

MEDAL AND FIRST-CLASS CERTIFICATE.—1. N. Macmichael, Argyleshire.

SECOND-CLASS CERTIFICATES.—2. E. G. Coker, Buckinghamshire, and R. Lees, Ayrshire—equal.

PHYSICAL LABORATORY.

HIGHLY COMMENDED.—J. G. Anderson, T. Armour, A. Douglas, C. Dykes, J. Middleton, J. Pickles, H. Walker.

THE NEIL-ARNOTT SCHOLARSHIP is awarded to H. Walker, on the usual conditions.

THE NEWTON BURSARY is awarded to T. W. Pickles.

P. G. TAIT, M.A., *Professor.*

VII.—RHETORIC AND ENGLISH LITERATURE.

I.—CLASS PRIZES AND CERTIFICATES OF DISTINCTION.

PRIZES.—1. Robert P. Davidson, Wigtownshire ; 2. James Mackenna, Dumfries ; 3. Hugh P. Macmillan, Greenock (*Medallists*) ; 4. Robert Macfie, Whithorn ; 5. Alex. C. M. Bell, Portobello ; 6. Sydney Smith, Edinburgh ; 7. Jas. Burnet, Edinburgh ; 8. Geo. Henderson, Edinburgh ; 9. Alex. C. Sturrock, Linlithgow ; 10. D. N. C. Hogg, Fifeshire ; 11. James Wallace, Aberdeenshire ; 12. Samuel Gray, Edinburgh ; 13. Samuel Carmichael, Comrie ; 14. David G. Hamilton, Birkenhead ; 15. Wm. Watson, Kirkcudbright ; 16. John L. M. Watt, Dalkeith ; 17. James Drever, Orkney, and Wm. P. Fell, Blairgowrie—equal.

CERTIFICATES OF DISTINCTION.—18. Walter G. Napier, Edinburgh ; 19. Laurence Ker, Leicester ; 20. John Mackintosh, Kingussie ; 21. Thos. W. Wilson, Perth ; 22. Wm. R. Colville, London, and Charles Robertson, Roxburghshire—equal ; 24. Wm. D. Ritchie, Edinburgh ; 25. David W. Morris, Edinburgh ; 26. David Waterston, Glasgow ; 27. Wm. J. Collier, Lerwick, and Jas. Kirk, Edinburgh—equal ; 29. Geo. Wm. Cooper, Portobello ; 30. David Nelson, Edinburgh ; 31. John A. Christie, Haddington, and John G. Nicolson, Wick—equal ; 33. Robert M. Samson, Ayrshire ; 34. Andrew Young, Perthshire ; 35. Alex. Bain, Lauder, and John J. MacLean, Argyllshire—equal ; 37. Jas. Wood, Edinburgh ; 38. Robert Godfrey, Edinburgh ; Wm. Maccluskey, Hamilton ; and Wm. S. Reid, Kilmarnock—equal.

2.—ESSAY PRIZES AND CERTIFICATES OF DISTINCTION.

PRIZES.—1. Sydney Smith, Edinburgh (*Medallist*) ; 2. A. C. M. Bell, Portobello ; 3. John L. M. Watt, Dalkeith ; 4. Robert P. Davidson, Wigtownshire ; 5. Wm. P. Fell, Blairgowrie, and Hugh P. Macmillan, Greenock—equal ; 7. Geo. Henderson, Edinburgh, and Robert M. Samson, Ayrshire—equal ; 9. Jas. Mackenna, Dumfries ; 10. Wm. S. Reid, Kilmarnock, and James Wallace, Aberdeenshire—equal.

CERTIFICATES OF DISTINCTION.—12. Robert Macfie, Whithorn ; 13. W. R. Colville, London ; 14. James R. Murdoch, Edinburgh ; 15. Alex. J. L. Laing, Edinburgh ; 16. Donald Duncan, Islay ; 17. D. G. Hamilton, Birkenhead ; 18. Alex. Bain, Lauder ; 19. Thos. W. Wilson, Perth ; 20. R. D. Buchanan, Edinburgh ; 21. David Nelson, Edinburgh ; T. B. Paterson, Edinburgh ; and D. Paterston, Dundee—equal.

HONOURABLE MENTION FOR WORK IN OLD ENGLISH.—George L. Moffat, Edinburgh.

3.—POETICAL COMPOSITION.

PRIZES.—Geo. W. Cooper, Portobello, and J. L. M. Watt, Dalkeith.
DAVID MASSON, LL.D., *Professor*.

VIII.—PRACTICAL ASTRONOMY.

FIRST-CLASS CERTIFICATES.—I. Andrew J. Herbertson and A. J. Ramsay—equal.

RALPH COPELAND, Ph.D., *Professor*.

IX.—AGRICULTURE AND RURAL ECONOMY.

FIRST-CLASS CERTIFICATES.—1. G. P. Foaden and Jas. M'Kinnell—equal (*Medallists*); 3. Robert Affleck and Robt. S. Seton—equal; 5. Wm. Adamson; 6. Marcus C. Wood; 7. Jas. Hutton; 8. Thos. Brown; 9. Chas. M. Bruce; 10. R. G. Foggo; 11. Alex. Chalmers, John Little, A. S. Wilks, C. C. Yorstoun, and A. W. Reid—equal.

SECOND-CLASS CERTIFICATES.—16. G. Henderson; 17. R. T. Barr and C. G. Kerr—equal; 19. Thos. S. Tweedie and John H. Donald—equal; 21. P. Waite; 22. J. M. Scott.

ESSAY ON FARM EXCURSIONS.—George P. Foaden (*Medal*); Robert Affleck (*Highly Commended*); Alex. Chalmers (*Commended*).

STEVEN SCHOLARSHIP, VALUE ABOUT £75.—George Pearse Foaden.

HIGHLAND AND AGRICULTURAL SOCIETY'S PRIZES, £10.—James L. Duncan, Robert Affleck, and Marcus C. Wood—equal.

ROBERT WALLACE, *Professor*.

X.—ENGINEERING.

FIRST-CLASS CERTIFICATES.—W. H. Kerr (*Medal and First Prize*); E. G. Coker (*Second Prize*); W. G. Rennie (*Third Prize*); J. W. Mackison, G. H. Stevenson, and C. A. R. Farrell.

SECOND-CLASS CERTIFICATES.—J. Campbell, T. A. Coward, G. S. Dalgleish, and J. S. H. Chancellor.

GEOMETRICAL AND MECHANICAL DRAWING.

FIRST-CLASS CERTIFICATES.—G. H. Stevenson (*Medal*), J. W. Mackison (*Prize*), W. H. Kerr.

SECOND-CLASS CERTIFICATES.—W. Brown and E. P. Macmillan.

SUMMER SESSION, 1891.

FIELD WORK.

FIRST-CLASS CERTIFICATES.—T. A. Coward and G. Moncur—equal (*Medallists*), E. G. Coker, G. H. Stevenson, F. St J. Gebbie, J. A. Purves, B. M. Jenkin, J. Campbell.

SECOND-CLASS CERTIFICATES.—J. L. S. Jeffares, C. A. R. Farrell, R. S. Seton, J. K. Borland, J. K. Ross, E. A. Fulton, G. S. Dalglish.

G. F. ARMSTRONG, M.A., C.E., *Professor.*

XI.—GEOLOGY AND MINERALOGY.

FIRST-CLASS CERTIFICATES.—Theodore Rettie, Edinburgh (*Medallist*), Andrew Lee, Berwickshire.

SECOND-CLASS CERTIFICATES.—John M'Callum, Crieff; W. W. Taylor, Alnwick.

PRACTICAL GEOLOGY AND MINERALOGY.

FIRST-CLASS CERTIFICATES.—Theodore Rettie, Edinburgh (*Medallist*), Banawari Lal Chaudhuri, Bengal.

SECOND-CLASS CERTIFICATES.—Andrew Lee, Berwickshire; John M'Callum, Crieff.

SUMMER SESSION, 1891.

STRUCTURAL AND FIELD GEOLOGY.

FIRST-CLASS HONOURS.—Thos. H. Taylor, Cambridgeshire (*Medallist*); John R. Dick, Forfarshire, and W. B. Heddle, Kirkwall—equal; 4. G. P. Foaden, Devonshire; 5. F. S. Cook, Cambridge; 6. A. B. Bertram, Haddingtonshire; 7. J. K. Ross, India, and A. W. Russell, Cupar—equal; 9. G. Moncur, Perth.

SECOND-CLASS HONOURS.—10. Johnstone Murray, Aberdeen; 11. T. D. M'Laren, Edinburgh; 12. D. M. Kay, Cumberland; 13. W. H. Brendon, Plymouth.

JAMES GEIKIE, D.C.L., LL.D., *Professor.*

XII.—THEORY, HISTORY, AND ART OF EDUCATION.

MEDALS.—T. Lamb and M. C. Wood, M.A.—equal.

FIRST-CLASS CERTIFICATES.—J. Bell, W. M. Budge, M.A.; A. Cameron, D. Cameron, J. Craig, F. Davies, B.A.; T. B. Hamilton, M.A.; R. S. Hill, J. Hourston, T. Lamb, J. Linton, M.A.; J. W. Lowthian, W. MacAlpine, J. M'Inroy, J. H. Melville, C. Menmuir, M. Mills, A. Mutch, J. W. Noble, J. M. Pryde, F. Reid, J. J. Reid, G. A. Russell, T. Tait, G. P. Walker, J. Wallace, M. C. Wood, M.A.; J. Yuill.

S. S. LAWRIE, LL.D., *Professor.*

XIII.—FINE ART.

COUSIN PRIZE.—William Souter, M.A.

G. BALDWIN BROWN, M.A., *Professor.*

XIV.—CELTIC LANGUAGES AND LITERATURE.

PRIZES AND FIRST-CLASS CERTIFICATES (SECOND YEAR.).—Neil Mackay, M.A., Strathy (*Medallist*); (FIRST YEAR)—1. John MacIennan, M.A., Maryburgh, Ross-shire (*Medallist*); 2. Donald M'Innes, M.A., Portree.

SPECIAL PRIZES.—£10, 10s. *given by the Highland Society of London*—Neil Mackay, M.A.; *Book Prizes given by John Mackay, Esq., Hereford*:—*For Old Gaelic*—Neil Mackay, M.A., Strathy, and Charles M. Robertson, Logierait; *For Modern Gaelic*—1. Donald M'Innes, M.A., Portree; 2. J. D. M'Donald, Stoer.

A Special Prize will be given in Session 1892-93 for the best Essay on "Holy Scripture in the Old Gaelic Church." The Essay must be given in by 31st December 1892.

DON. MACKINNON, M.A., *Professor*.

XV.—FORESTRY.

FIRST-CLASS CERTIFICATE.—1. Robert Affleck, Castle-Douglas.

SECOND-CLASS CERTIFICATES.—2. R. Stewart M'Dougall, M.A., Edinburgh, and J. Melvin Lowson, M.A., B.Sc., Forfar—equal; 4. William Adamson, Craigadan, Kirkcudbrightshire; 5. John H. Donald, Galston, Ayrshire; 6. Charles M. Bruce, Inverurie; 7. Percival C. Waite, London; 8. John W. Moir, Edinburgh.

FRED. BAILEY, Lieut.-Colonel R.E., *Lecturer*.

XVI.—AGRICULTURAL ENTOMOLOGY.

FIRST-CLASS HONOURS.—1. R. S. M'Dougall (*Medallist*); 2. W. Adamson; 3. M. C. Wood; 4. A. Waterfield; 5. P. Waterfield; 6. P. Waite.

SECOND-CLASS HONOURS.—7. J. Donald; 8. R. Affleck; 9. C. M. Bruce; 10. R. Barr.

W. FREAM, LL.D., B.Sc., *Lecturer*.

TUTORIAL CLASSES.

SUMMER SESSION, 1891.

I.—HUMANITY.

THIRD CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. R. M. Samson, Cumnock; 2. James Burnet, Edinburgh, and A. A. Wilson, Edinburgh—equal.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. George D. Low, Edinburgh, and James Mackenna, Dumfries—equal ; 3. Daniel Connel, Burntisland ; 4. George C. Stewart, Edinburgh.
SECOND-CLASS CERTIFICATES OF MERIT.—5. A. J. Walker, Perth ; 6. Percy Pankhurst, Fareham ; 7. David Murray, Laurencekirk.
LATIN COMPOSITION.—1. George D. Low, Edinburgh ; 2. James Mackenna, Dumfries ; 3. David Connel, Burntisland.
LATIN LITERATURE.—George D. Low, Edinburgh.

JUNIOR CLASS.

This Class met regularly, but no competitive examinations were held.

FRANCIS R. JAMIESON, M.A.,
Assistant to the Professor of Humanity.

II.—GREEK.

THIRD CLASS.

No competitive examinations held.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. G. D. Low, Glasgow ; 2. G. C. Steuart, Edinburgh ; 3. D. Connel, Burntisland ; 4. A. J. Walker, Perth.
SECOND-CLASS CERTIFICATES.—5. P. Pankhurst, Fareham ; 6. T. H. Maclaren, Edinburgh ; 7. D. Murray, Kincardine.
COMPOSITION.—1. G. D. Low ; 2. A. J. Walker.

J. A. SMITH, M.A.,
Assistant to the Professor of Greek.

III.—MATHEMATICS.

JUNIOR CLASS.

SECOND-CLASS CERTIFICATES.—J. M. Macdonald, Edinburgh ; W. A. Skinner, Edinburgh.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. J. Hossell Henderson, Glasgow ; 2. W. R. Henderson, Edinburgh ; 3. Hugh L. Jackson, Edinburgh ; 4. Edwin Rogerson, Orkney.
SECOND-CLASS CERTIFICATES.—John Gifford, Edinburgh ; Alexander Miles, Biggar ; J. M. Robertson, South Queensferry.

ADVANCED CLASS.

No examinations were held in connection with this Class.

R. E. ALLARDICE, M.A.,
Assistant to the Professor of Mathematics.

IV.—LOGIC AND PSYCHOLOGY.

FIRST-CLASS CERTIFICATES. — W. R. Henderson, Edinburgh ; J. MacKenna, Dumfries ; A. Duncan Smith, Dundee.

SECOND-CLASS CERTIFICATES. — W. P. Fell, Blairgowrie ; B. D. Morris, Staffordshire ; G. Swanson, Edinburgh ; J. L. Maclean Watt, Dalkeith.

R. P. HARDIE, M.A.,

Assistant to the Professor of Logic and Metaphysics.

V.—MORAL PHILOSOPHY.

FIRST-CLASS CERTIFICATES (WITH PRIZES).—A. C. Montgomery Bell, Benjamin D. Morris, Sydney Smith.

SECOND-CLASS CERTIFICATE.—W. A. Thompson.

CHARLES M. DOUGLAS, M.A.,

Assistant to the Professor of Moral Philosophy.

VI. NATURAL PHILOSOPHY,

JUNIOR CLASS.

PRIZE AND FIRST-CLASS CERTIFICATE.—J. Hossell Henderson.

SECOND-CLASS CERTIFICATES.—J. Paterson and J. M. Robertson—equal.

No examinations were held in the Advanced Class.

W. PEDDIE, D.Sc.,

Assistant to the Professor of Natural Philosophy.

Examination Papers for Degrees in Arts.

EXAMINATION FOR CURRICULUM OF THREE SESSIONS AND FOR FIRST YEAR'S BURSARIES.

LATIN.

Saturday, 17th October 1891.—9 to 12 o'clock.

1. Translate into Latin :—

Strengthened at home by these successes abroad, the sanguine despot of Syracuse was stimulated to still greater enterprises. He resolved to commence aggressive war with the Carthaginians. But against such formidable enemies large preparations were indispensable, defensive as well as offensive, before his design could be proclaimed. First he took measures to secure the defensibility of Syracuse against all contingencies. Five Grecian cities on the south of the island, one of them the second in Sicily, had already undergone the deplorable fate of being sacked by a Carthaginian host ; a calamity which might possibly be in

reserve for Syracuse also, especially if she provoked a war, unless the most elaborate precautions were taken to render a successful blockade impossible.

II. Translate into English :—

Cretensibus cum hoc responso dimissis Chalcidenses vocati, quorum legatio ipso introitu, ob id quod Micythion princeps eorum pedibus captus lectica est introlatus, omnes convertit. *Ultimae necessitatis* extemplo visa res, in qua ita adfecto excusatio valetudinis aut ne ipsi quidem petenda visa foret aut data petenti non esset. Cum sibi nihil *vivi* reliquum praeterquam linguam ad deplorandas patriae suae calamitates praefatus esset, exposuit civitatis primum suae benefacta et vetera et ea quae *Persei bello* praestitissent ducibus exercitibusque Romanis; tum quae primo C. Lucretius in populares suos praetor Romanus superbe avare crudeliter fecisset, deinde quae tum *cum maxime* L. Hortensius faceret: quem ad modum omnia sibi, etiam iis quae patiantur tristiora, patienda esse ducant potius quam fide decedant, sic quod ad Lucretium Hortensiumque attineret scire tutius fuisse claudere portas quam in urbem eos accipere.

Write short explanatory notes on words or phrases italicised.

III. [*Candidates for Bursaries are expected to do this passage in addition to the two above.*]

Cui Iuno submissa: 'Quid, O pulcherrime coniunx, Sollicitas aegram et tua tristitia dicta timentem?

Si mihi, quae quondam fuerat, quamque esse decebat,

Vis in amore foret, non hoc mihi namque negares,

Omnipotens, quin et pugnae subducere Turnum,

Et Dauno possem incolumem servare parenti.'

Cui rex aetherii breviter sic fatur Olympi:

'Si mora praesentis leti tempusque caduco

Oratur iuveni, meque hoc ita ponere sentis,

Tolle fuga Turnum, atque instantibus eripe fatis.

Hactenus indulsisse vacat. Sin altior istis

Sub precibus venia ulla latet, totumque moveri

Mutarive putas bellum, spes pascis inanes.'

Et Iuno allacrimans: 'Quid si, quod voce gravaris

Mente dares, atque haec Turno rata vita maneret?

Nunc manet insontem gravis exitus; aut ego veri

Vana feror. Quod ut o potius formidine falsa

Ludar, et in melius tua, qui potes, orsa reflectas.'

Write short notes upon meaning or construction of words italicised.

GREEK.

Saturday, 17th October 1891.—1 to 4 o'clock.

I. Translate :—

(1.) ὡς δ' αὖ ταῦτ' ἀκούσαντες οἱ δίκασται ἔτι μᾶλλον ἐθορύβουν εἰκότως, αὐτοῖς εἰπεῖν τὸν Σωκράτην· Ἀλλὰ μείζω μὲν, ὦ ἄνδρες, εἶπεν ὁ θεὸς ἐν χρησμοῖς περὶ Λυκούργου τοῦ Λακεδαιμονίου νομοθετήσαντος ἢ περὶ ἐμοῦ.

λέγεται γὰρ εἰς τὸν ναὸν εἰσιόντα προσειπεῖν αὐτόν· Φροντίζω πότερα θεὸν σε εἶπω ἢ ἄνθρωπον. ἐμὲ δὲ θεῶ μέν οὐκ εἰκασεν, ἀνθρώπων δὲ πολλῶ προέκρινεν ὑπερφέρειν. ὅμως δὲ ὑμεῖς μὴδὲ ταῦτ' εἰκῇ πιστεύσητε τῷ θεῷ, ἀλλὰ καθ' ἕνα ἑκαστον ἐπισκοπεῖτε ὧν εἶπεν ὁ θεός. τίνα μὲν γὰρ ἐπίστασθε ἦσσαν ἐμοῦ δουλεύοντα ταῖς τοῦ σώματος ἐπιθυμίαις; τίνα δὲ ἀνθρώπων ἐλευθεριώτερον, ὃς παρ' οὐδενὸς οὔτε δῶρα οὔτε μισθὸν δέχομαι; σοφὸν δὲ πῶς οὐκ ἂν τις εἰκότως ἄνδρα φήσειεν εἶναι, ὃς ἐξ ὅτουπερ ξυνιέναι τὰ λεγόμενα ἠρξάμην, οὐπώποτε διέλιπον καὶ ζητῶν καὶ μαθητῶν ὃ τι ἐδυνάμην ἀγαθόν; ὥς δὲ οὐ μάτην ἐπόνουν οὐ δοκεῖ ὑμῖν καὶ τάδε τεκμήρια εἶναι, τὸ πολλοὺς μὲν πολίτας τῶν ἀρετῆς ἐφιεμένων, πολλοὺς δὲ ξένων, ἐκ πάντων προαιρεῖσθαι ἐμοὶ ξυνεῖναι;

- (2.) Ἀτρεΐδῃ κύδιστε, ἄναξ ἀνδρῶν Ἀγάμεμνον,
μὴ ὄφελος λίσσεσθαι ἀμύμονα Πηλεΐωνα,
μυρία δῶρα διδούς· ὁ δ' ἀγῆνωρ ἐστὶ καὶ ἄλλως·
νῦν αὖ μιν πολὺ μᾶλλον ἀγνηορίησιν ἐνῆκας.
ἀλλ' ἦτοι κύνειον μὲν ἐάσομεν, ἢ κεν ἔησιν,
ἢ κε μένη· τότε δ' αὖτε μαχήσεται, ὅππότε κέν μιν
θυμὸς ἐνὶ στήθεσσι ἀνώγῃ καὶ θεὸς ὄρσῃ.
ἀλλ' ἄγεθ', ὥς ἂν ἐγὼ εἶπω, πειθώμεθα πάντες·
νῦν μὲν κοιμήσασθε τεταρπόμενοι φίλον ἦτορ
σίτου καὶ οἴνοιο· τὸ γὰρ μένος ἐστὶ καὶ ἀλκή.
αὐτὰρ ἐπεὶ κε φανῇ καλὴ ῥοδοδάκτυλος Ἥως,
καρπαλίμως πρὸ νεῶν ἐχέμεν λαὸν τε καὶ ἵππους
δοτρύνων, καὶ δ' αὐτὸς ἐνὶ πρώτοισι μάχασθαι.

Write grammatical notes on μὴ ὄφελος λίσσεσθαι, ἢ κεν ἔησιν, ὥς ἂν ἐγὼ εἶπω, ἐχέμεν.

II. Give the stems, vocat. sing., gen. and dat. plur. of: πολίτης, θῆρ, δεσπότης, λεῷς, Ἑρμῆς, οὖς, κλέος.

Decline in full ἀπλοῦς ἀνὴρ, μέγας βασιλεὺς, ὅστις, εἷς.

Parse ὁδοῦσι, λᾶας, ἀγχιστα, θᾶσσαν, δουλοῖς, ἔσαν, πεπαύσει, δεδίασι, ἐκόθητο, ἐρρώσο, ἐάλωσαν, μεμέληκε, φάνηθι, χρῶ.

Give the chief tenses of θρώσκω, ῥέω, ὀφλισκάνω, ἀναλίσκω, ἄχθομαι, κλαίω, πνέω, ὠνέομαι, φθάνω, τήκω, λαγχάνω, ἐστιάω.

Define a "verb-stem" and a "tense-stem." Give the "verb-stem" and the "present-stem" of λύω, τίθημι, λείπω, τυγχάνω, γιγνώσκω, σβέννυμι.

III. Translate into Greek:—

- (1) Call no man happy (εὐδαίμων) before he dies, but only lucky (εὐτυχής).
- (2) Though he knows nothing he thinks that he knows everything.
- (3) They made a truce (σπένδεσθαι) on condition that either side should be allowed to retreat (ἀναχωρεῖν).
- (4) Do you think that I would sell (ἀποδόσθαι) my country for gold; or that, if I did so, I should not deserve punishment?

- (5) At Athens we pass (διάγειν) a pleasant life, conversing upon everything which is of interest (μέλειν) to mankind.
- (6) Socrates on one occasion, when an impudent young fellow kicked (λακτίζειν) him, said to those who wished to prosecute (διώκειν) him: "What! if a young ass kicked me, would you have me kick it back?"
- (7) Some one asked an Egyptian what he was carrying wrapped up (συγκαλύπτειν). "It was wrapped up," he replied, "on purpose that you should not know."

FOR CANDIDATES FOR BURSARIES ONLY.

IV. [*Polynices, on whom Œdipus has just invoked a curse, is here the speaker.*]

Translate :—

οἴμοι κελεύθου τῆς τ' ἐμῆς δυσπραξίας,
οἴμοι δ' ἐταίρων· οἶον ἄρ' ὁδοῦ τέλος
"Ἀργούς ἀφωρμήθημεν, ὦ τάλας ἐγώ,
τοιούτον οἶον οὐδὲ φωνῆσαι τινα
ἔξεσθ' ἐταίρων, οὐδ' ἀποστρέψαι πάλιν,
ἀλλ' ὄντ' ἀναυδὸν τῇδε συγκύρσαι τύχῃ.
ὦ τοῦδ' ὅμαιμοι παῖδες, ἀλλ' ὑμεῖς, ἐπεὶ
τὰ σκληρὰ πατρός κλύετε ταῦτ' ἀρωμένον,
μή τοί με πρὸς θεῶν σφῶ γ', ἐὰν αἱ τοῦδ' ἀραι
πατρός τελῶνται καὶ τις ὑμῖν ἐς δόμους
νόστος γένηται, μή μ' ἀτιμάσῃ τέ γε,
ἀλλ' ἐν τάφοισι θέσθε κἀν κτερίσμασιν.
καὶ σφῶν ὁ νῦν ἔπαινος, δν κομίζετον
τοῦδ' ἀνδρὸς οἷς πονεῖτον, οὐκ ἐλάσσονα
ἔτ' ἄλλον οἶσει τῆς ἐμῆς ὑπουργίας.

V. For Greek Prose :—

After amusing them with these riddles in government for a while, I opened the case, and told them the story at large of my living in the island, and how I managed both myself and the people there that were under me, just as I have since minuted it down. They were exceedingly taken with the story, and especially the prince, who told me with a sigh, that the true greatness of life was to be master of ourselves; that he would not have changed such a state of life as mine to have been Czar of Muscovy.

ROBINSON CRUSOE.

MATHEMATICS.

Monday, 19th October 1891.—9 to 12 o'clock.

Candidates for the Entrance Examination alone need not attempt to answer more than TWELVE questions.

1. State briefly the principles by means of which you determine whether the number of conditions given for constructing a geometrical figure is sufficient. Illustrate by counting the number of conditions

required to determine a plane figure consisting of a circle and two indefinite straight lines—1st, when its position in its plane is taken into account; 2d, when position is not taken into account.

To draw a pair of straight lines, each of which passes through a given point, which make a given angle with each other and which make equal angles with a given straight line. How many solutions of the problem are there?

2. Prove that a triangle is determined when a side and two adjacent angles are given.

When a side of a plane pentagon is given, how many angles are required to determine the figure?

An equilateral triangle OAB is turned about its vertex O into a new position $OA'B'$: if AB and $A'B'$ intersect in K , show that OK bisects the angle $A'OB$.

3. Prove that a trapezium is equal in area to a rectangle whose sides are the distance between the parallel sides of the trapezium and half the sum of these sides.

$ABCD$ is a square; P, Q, R, S points in the sides AB, BC, CD, DA such that PS and QR are perpendicular to the diagonal AC : shew that the area of the trapezium $PQRS$ depends merely on the distance between PS and QR ; and find when it is a maximum.

4. Prove that the sum of the squares on the sides of a triangle is double the sum of the squares on the median and on half the base.

State, without proof, a generalisation of this theorem. $ABCD$ is a square described externally on the hypotenuse AB of a right-angled triangle OAB ; and E is the centre of the square: shew that $OD^2 - OC^2 = OA^2 - OB^2$; and $OC^2 + OD^2 = 4OE^2 + AB^2$.

5. Prove that the external angle in a cyclic quadrilateral is equal to the interior opposite angle. Deduce by the method of limits that the angles which a chord through any point makes with the tangent at that point are equal to the angles in the alternate segments into which the chord divides the circle.

A and B are two circles, each of which passes through the centre of the other, and C is one of their points of intersection. A straight line PCQ meets A and B in P and Q respectively: find the locus of the intersection of PD and QE , D and E being the centres of A and B respectively.

6. Shew that if all the sides and angles of a convex polygon closed or unclosed, be equal, a circle can be described through its vertices.

I is the incentre and I_1 the excentre corresponding to the side BC of the triangle ABC ; show that the four points, I, I_1, B, C lie on a circle whose centre lies on the circumcircle of ABC .

7. Show that, if two triangles have one angle of the one equal to one angle of the other, and also the sides about these angles proportional, they are similar.

Two circles, A and B , touch externally at P , RQ is a common tangent, touching A in Q and B in R ; QP meets B in S : if T be the middle point in QS , show that $TR = TQ$.

8. Shew that the areas of similar triangles are in the duplicate ratio of their homologous sides.

State the corresponding theorem for similar figures generally, and apply it to circles.

ABC is a triangle, P and Q points in AC and AB respectively, such that QPM is perpendicular to BC , and D is the projection of A on BC ; shew that $\text{area } PDC : \text{area } QDB = MC : MB$.

9. A number of six significant digits is multiplied by another of five, give an estimate of the utmost effect on the product of increasing the last digit in each of the factors by five.

Evaluate $31'60812 \times '03694 \div 6'8341234$ to four places of decimals.

10. What do you mean by saying that one integral function of x is exactly divisible by another?

Simplify and arrange symmetrically

$$(b^2 + 2bc + c^2)(b^2 - 2bc + c^2) + (c^2 + 2ca + a^2)(c^2 - 2ca + a^2) + (a^2 + 2ab + b^2)(a^2 - 2ab + b^2).$$

Determine p and q in order that the terms containing x and x^2 may disappear from the distributed product of

$$(1 + px + qx^2 + x^3)(1 + x)^4.$$

11. Shew that the factors of the quadratic function $ax^2 + bx + c$ will be imaginary if $b^2 - 4ac$ be negative.

Factorise

$$(a) \ 18(x+1)^2(x+2)^2 - 8(x-3)^2(x+1)^2;$$

$$(b) \ x^3 - x - 6; \quad (\gamma) \ x^2 - y^2 + 2y - 1.$$

12. Shew by means of an example that the sum of two improper algebraical fractions may be a proper algebraical fraction.

Express each of the following as a rational fraction at its lowest terms

$$(a) \ \frac{1}{(x^2 + 2x + 1)(x + 2)^2} + \frac{2x^2 + 7x + 7}{(x + 1)(x^2 + 4x + 4)} - \frac{2}{(x + 2)};$$

$$(b) \ \frac{x^2 + 3x + 1}{x^4 + x^3 - 4x^2 + x + 1} - \frac{x^3 - 3x + 1}{x^4 - x^3 - 4x^2 - x + 1}.$$

13. What do you mean by saying that the system of equations, $Ax + By + C = 0$, $A'x + B'y + C' = 0$, $A''x + B''y + C'' = 0$ is consistent? Find the condition for consistency.

Solve the following

$$(\) \ \frac{(ax+b)(cx+d)}{acx+bc+ad} + \frac{(ax+c)(cx+f)}{acx+ec+ef} = 2x;$$

$$(\beta) \ \begin{cases} (x+1)^2 + 2(y-1) = 51, \\ 2(x+1)^2 - 3y = 92. \end{cases}$$

14. A owes B £100, due at the beginning of the year; B owes A £110, 4s., due at the end of the year. Find at what time or times

during the year A and B may be held to be quits, allowing interest and true discount at 10 per cent. simple interest.

Solve the following equations

$$(a) (x-1)(x^2+3x+2)-(x+1)(x^2-3x+2)=0;$$

$$(\beta) \frac{\sqrt{x}+\sqrt{(x+1)}}{\sqrt{x}-\sqrt{(x+1)}}+\frac{\sqrt{x}+\sqrt{(x-1)}}{\sqrt{x}-\sqrt{(x-1)}}=8.$$

15. Explain why in certain cases the sum of an infinite number of terms of a geometrical series is finite; and apply your theory to the evaluation of a recurring decimal fraction.

A pyramid is built of square layers of cubical blocks of stone, the number of blocks in the side of each square being greater by two than in the next above. If the top consist of a single block, and there be n layers, how many blocks are there in the pyramid?

16. Assuming the addition-formulæ for $\cos(A \pm B)$ and $\sin(A \pm B)$, express $\cos 2A$ and $\tan 2A$ rationally in terms of the circular functions of A .

Shew that

$$(a) \frac{\sec^6\theta + \tan^6\theta}{\sec^2\theta + \tan^2\theta} = (1 - \tan\theta + \tan^2\theta)(1 + \tan\theta + \tan^2\theta);$$

$$(\beta) \frac{\sin A - \cos A + \sin B + \cos B}{\sin A + \cos A - \sin B + \cos B} = \tan \frac{1}{2}(A+B).$$

17. Shew that in any triangle $a = b \cos C + c \cos B$; and deduce an expression for $\cos A$ in terms of a, b, c .

P is any point in the base BC of a triangle ABC . Q and S are the projections of P on AC and AB respectively, and θ the inclination of AP to BC : express QS in terms of b, c, R and θ ; and find when QS is a minimum.

ENGLISH.

FIRST PAPER.

Monday, 19th October 1891.—1 to 2 o'clock.

Write an Essay on either of these subjects, attending to expression and punctuation, as well as matter—

A Minor Poet.

A New Author.

SECOND PAPER.

Monday, 19th October 1891.—2 to 4 o'clock.

1. Transcribe these passages in Modern English:—

(a) Lenten ys come wiþ loue to toune,
Wiþ blosmen & wiþ briddes rounne,
þat al þis blisse bryngeþ;

Dayes-eges in þis dales,
 Notes suete of nyhtegales,
 Vch foul song singeþ.
 Þe þrestelcoc him þreteþ oo,
 Away is huere wynter wo,
 When woderoue springeþ;
 Þis foules singeþ ferly fele,
 Ant wlyteþ on huere wynter wele,
 Þat al þe wode ryngþ.

(b) Summe iuglurs beoð þet ne kunnen seruen of non oðer gleo, buten makien cheres, & wrenchen mis hore muð, & schulen mid hore eien. Of þis mestere serueð þeo uniselie ontfulle iðe deofles kurt, to bringen o leihtr hore ontfulle louerd. Uor gif ei seið wel oðer deð wel, nonesweis ne muwen heo loken þiderward mid riht eie of gode heorte; auh winckeð oðere half, & biholdeð o luft & asquint: & gif þer is out to eadwiten, oðer [loken] lodlich, þiderward heo schuled mid eiðer eien.

2. Derive and explain *twelve* of the following forms, taking *four* from each section:—

(i) Orchard; aftermath; scrivener; mosaic; laity; sirloin; pibroch.

(ii) Mercer; grocer; tailor; stationer; auctioneer; restaurant; milliner.

(iii) Argosy; parchment; ducat; damson; hock; roan (s); sardonic.

3. To what elementary notions of relationship may we reduce the syntax of (a) the clause, the simple sentence, and the complex sentence, (b) the compound sentence, and (c) the paragraph? Test your answer by an examination of your scheme of analysis.

4. Explain carefully the following terms:—Bilingualism; tense; feminine ending; dialect; doublet; macaronic verse; cognate; Latin of the Fourth Period; syllable; Anglo-French. *Give examples.*

5. (a) Describe the following stanza prosodically, giving the metrical and rhyming formulæ:—

Blow, blow, thou winter wízd,
 Thou art not so unkind
 As man's ingratitude;
 Thy tooth is not so keen
 Because thou art not seen,
 Although thy breath be rude.

Heigh ho! sing heigh ho! under the green holly;
 Most friendship is feigning, most loving mere folly;
 Then, heigh ho! the holly!
 This life is most jolly.

(b) Name or quote stanzas in which the rhymes are arranged thus—

(i) *a b a b*; (ii) *a b b a*; (iii) *a b a b b c b c c*; and describe the metre in the examples which you select.

6. Discuss the figures of speech in the following passages:—

(i) If you be not mad, be gone; if you have reason, be brief.

- (ii) We cultivate literature on a little oatmeal.
- (iii) Ah, Tam ! ah, Tam ! thou 'll get thy fairin'.
- (iv) And gentle Dulness ever loves a joke.
- (v) So the two brothers and their murdered man
Rode past fair Florence.
- (vi) At my poor house look to behold this night
Earth-treading stars that make dark heaven light.
- (vii) Conspicuous for its absence.

7. Where in English verse have any *three* of the following subjects been described :—Sleep ; an April morning ; any Greek myth ; *dolce far niente* ; a poet's epitaph ? Give two references in each case, and contrast briefly the passages on any *one* of the selected themes.

JOHN WELSH (CARLYLE) MATHEMATICAL BURSARIES AND GEORGE HERIOT BURSARIES.

PURE GEOMETRY.

Tuesday, 20th October 1891.—9 to 12 o'clock.

[Any reasonable question regarding the use of technical terms will be answered by the superintendent of the examination.]

1. If A, B, C , and A', B', C' , are two sets of points, one in each of two parallel straight lines, and if $AB : BC = A'B' : B'C'$, then AA', BB', CC' , are concurrent.

In a triangle ABC , D and D' are points in BC , E is a point in CA and F a point in AB . If DE is parallel to BA , EF to CB , and FD' to AC , and DE and $D'F$ intersect in G , then DF, GA , and $D'E$ are concurrent.

2. The feet of the perpendiculars drawn to the sides of a triangle from any point on the circumcircle lie on a straight line (the pedal line of the point).

If any point P on the circumcircle of a triangle be joined to the vertices, and AA' be drawn making the same angle as PA with the bisector of the angle A , and BB' and CC' be similarly constructed ; then $AA', BB',$ and CC' will be parallel to one another and perpendicular to the pedal line of P .

3. Define the power (or potency) of a point with reference to a circle, and show that the locus of a point that has equal powers with reference to two circles is a straight line.

The sum of the powers of two points P and Q with reference to a circle is equal to twice the power of the middle point of PQ together with half the square on PQ .

4. When are two circles said to intersect orthogonally ?

Find the relation connecting the radii and the distance between the centres of two circles that intersect orthogonally.

AD , BE , CF are the perpendiculars of a triangle ABC . If a circle be circumscribed about $AFDC$, and another be described with B as centre to cut this circle orthogonally, then this circle and the two corresponding circles which have A and C for centres will intersect orthogonally.

5. The inverse of a straight line is, in general, a circle passing through the centre of inversion.

Invert the theorem that if a pencil of four rays issues from a point A , then the anharmonic ratio of the segments made by these four rays on any straight line passing through a fixed point B is constant. [Take B as centre of inversion.]

6. Given a triangle ABC , show that the locus of a point P which moves so that $PA : PB = CA : CB$ is a circle passing through C .

Show that this circle and the other two corresponding circles, which pass through A and B respectively, have a common radical axis. Calculate the radii of these three circles in terms of the sides of ABC .

7. If A , B , P are three points in a straight line, what is meant by the harmonic conjugate of P with reference to A and B ?

If P is a fixed point in the plane of a given circle, and a straight line through P meets the circle in A and B , show that the locus of the harmonic conjugate of P with reference to A and B is a straight line (the polar of P).

Show how to construct triangles which possess the property that any side is the polar of the opposite vertex.

8. Define the cross (anharmonic) ratio of a range of four points in a straight line.

If the four points A , B , P , Q are collinear and the four points $AB'P'Q'$ are collinear, and if the cross ratio of the first set of points is equal to the cross ratio of the second set, then BB' , PP' , and QQ' are concurrent.

State an analogous proposition with reference to two sets of concurrent straight lines a , b , p , q , and a , b' , p' , q' .

9. The locus of the middle points of a series of parallel chords of a parabola is a straight line parallel to the axis.

Given the extremity of a diameter of a parabola, the directions of the diameter and of the corresponding ordinates and a point on the parabola, to construct the focus and directrix.

10. Assuming that, if AA' is the major-axis of an ellipse, P a point on the ellipse, and N the foot of the ordinate from P , then $PN^2 : AN.NA'$ is constant. Show that an ellipse may be derived from a circle by dividing all the ordinates to any diameter in a given ratio.

OX and OY are straight lines at right angles to one another; A and B are points, one in each of these straight lines, such that AB is constant. If P divide AB in a constant ratio, the locus of P is an ellipse of which the semi-axes are equal to PA and PB .

11. Prove the theorem that gives the volume of a triangular pyramid.

O is a point inside a tetrahedron $ABCD$. If AO , BO , CO , DO meet the faces in P , Q , R , S , show that

$$PO/PA + QO/QB + RO/RC + SO/SD = 1.$$

12. Show that a sphere of any radius may be inscribed in a given right circular cone.

A sphere of radius r is inscribed in a right circular cone, the vertical angle of which is a right angle. Calculate, in terms of r , the volume between the surface of the sphere and the tangent plane drawn parallel to the circle of contact (between the centre of the sphere and the vertex of the cone).

EXAMINATION PAPERS FOR DEGREE OF M.A. IN
1891-92.

PASS EXAMINATION.

A.—DEPARTMENT OF CLASSICAL LITERATURE.

LATIN.

Tuesday, 13th October 1891.—9 to 11 o'clock.

I. Translate into Latin Prose:—

Cotta was not convinced, and the majority of officers supported him. The first duty of a Roman army, he said, was obedience to orders. Their business was to hold the post which had been committed to them till they were otherwise directed. The officers were consulting in the midst of the camp, surrounded by the legionaries. "Have it as you wish," Sabinus exclaimed, in a tone which the men could hear; "I am not afraid of being killed. If things go amiss, the troops will understand where to lay the blame. If you allowed it, they might in forty-eight hours be at the next quarters, facing the chances of war with their comrades, instead of perishing here alone by sword or hunger." . . . The discussion lasted till midnight. Sabinus was obstinate, Cotta at last withdrew his opposition, and the fatal resolution was formed to march at dawn.

FROUDE: *Caesar*.

II. Translate:—

Magnificumque id Syphaci (nec erat aliter) visum, duorum opulentissimorum ea tempestate duces populorum uno die suam pacem amicitiamque petentes venisse. Utrumque in hospitium invitat; et quoniam fors eos sub uno tecto esse atque ad eosdem penates voluisset, contrahere in colloquium dirimendarum simultatum causa est conatus: Scipione abnuente, aut privatim sibi ullum cum Poeno odium esse, quod colloquendo finiret, aut de republica se quicquam cum hoste agere iniussu senatus posse. Illud magnopere contendente rege, ne alter hospitum exclusus mensa videretur, ut in animum induceret ad eandem venire epulas, haud abnuit. Coenatumque simul apud regem est: eodem etiam lecto Scipio atque Asdrubal (quia ita cordi erat regi) accubuerunt.

Tuesday, 13th October 1891.—11.30 to 1.30 o'clock.

I. Translate:—

(1) Horace, *Odes*, ii. 15, ll. 1-20, from "Iam pauca aratro," to "novo decorare saxo."

(2) Virgil, *Aeneid*, v., ll. 704-717, from "Tum senior Nautes," to "sine moenia fessi."

(3) Cicero, *De Orat.*, i. 38, 174-5, from "Tu mihi quum in circulo," to "exheres filius."

(4) Tacitus, *Annals*, iv. 33, from "Nam cunctas nationes," to "aliorum eventis docentur."

II. Translate *four* of the following with brief notes on the words italicised:—

(1) Turgidus *Alpinus* iugulat dum Memnona, dumque
Defingit Rhēni luteum caput, haec ego *ludo*,
Quae neque in *aede* sonent certantia iudice *Tarpe*
Nec redeant iterum atque iterum spectanda theatri.

(2) Qui species *alias veri* scelerisque tumultu
Permixtas capiet, commotus habebitur, atque
Stultitiane erret, nihilum distabit, an ira.

(3) Has, ubi certa sedet patribus sententia pugnae,
Ipse *Quirinali trabea cinctuque Gabino*
Insignis reserat *stridentia limina* consul,
Ipse vocat pugnas.

(4) Quum igitur vehementius inveheretur in causam principum consul Philippus *Drusique* tribunatus pro senatus auctoritate susceptus infringi iam debilitarique videretur, dici mihi memini *ludorum Romanorum* diebus *L. Crassum* quasi colligendi sui causa se in Tusculanum contulisse.

(5) Saevitum tamen in bona, non ut *stipendiariis* pecuniae redderentur, quorum nemo repetebat, sed *liberalitas Augusti* avulsa, computatis singillatim quae *fisco* petebantur.

(6) Quod ubi *L. Apronio inferioris Germaniae pro praetore* cognitum, *vexilla legionum* e superiore provincia *peditumque et equitum auxilium* delectos accivit.

III. Answer any *three* of the following questions:—

(1) What is the nature of Horace's obligations to (a) Alcaeus, (b) Archilochus, (c) Lucilius? Sketch the life of one of the three.

(2) Do you think that there is more (a) originality (b) poetic merit in the Pastoral or in the Epic poetry of Vergil? Give very shortly reasons for your answer.

(3) Narrate the movements of Caesar and Pompey between the crossing of the Rubicon and the battle of Pharsalia.

(4) Give an account of Cicero's life previous to his consulship, with especial reference to his training as an orator.

(5) Discuss shortly the merits and the failings of Tacitus as a historian.

(6) What alterations did Tiberius introduce in the personal position and authority of the Princes?

Monday 4th April 1892.—9 to 11 o'clock.

1. Translate into Latin prose:—

But because they be far from the sea, compassed and enclosed round about with high mountains, they do content themselves with the fruits of their own land, which is of itself very fair and fertile. For this cause they go not to other countries, nor do others come to them. And according to the old custom of the land they desire not to enlarge their dominions; and those that they have by reason of the high hills are easily defended; and the tribute which they pay to their lord and king setteth them free from all warfare. Thus their life may better be called happy or wealthy than notable or famous: for they are not known even by name, I suppose, except only to their next neighbours. They that in this land be convicted of theft make restitution of that which they stole to the right owner, and not (as they do in other lands) to the king, whom they think to have no more right to the stolen thing than the thief himself.

2. Translate into English, Livy, vii. 33, from "Proelium*ut quod maxime," to "patefacta strage vasta cernetis."

Monday, 4th April 1892.—11.30 to 1.30 o'clock.

1. Translate Horace, *Odes*, i. 28 ll. 17-36.

2. Virgil, *Æn.*, v. ll. 210-222.

3. Cicero, *de Oratore*, i. 20, §§ 19-20.

4. Tacitus, *Annals*, iv. 31, from "His tam adsiduis," to "e re publica id esse."

II. Translate *four* of the following with brief notes on the words italicised:—

(1) Tum Praenestinus salso multoque fluenti
Expressa *arbusto* regerit convicia, durus
Vindemiator et invictus, cui saepe viator
Cessisset magna compellans voce *cuculum*.

(2) Nec satis est cara pisces averrere *mensa*
Ignarum, quibus est ius aptius et quibus assis
Languidus *in cubitum* iam se conviva reponet.

(3) Quin etiam veterum effigies ex ordine avorum
Antiqua e cedro, Italusque, *paterque Sabinus*
Vitisator, curvam servans, *sub imagine* falcem,
Saturnusque senex, *Janique bifrontis imago*
Vestibulo adstabant.

(4) Quid? in his paucis diebus nonne nobis in tribunali Q. Pompeii *praetoris urbani* familiaris nostri sedentibus homo ex numero disertorum postulabat, ut illi, unde peteretur, vetus atque usitata *exceptio* daretur, *cuius pecuniae dies fuisset?*

(5) *Exstructa iam sponte praefecti castra*, datos in manum milites; cerni effigiem eius in *monumentis Cn. Pompei*; communes illi *cum*

familia Drusorum fore nepotes ; precandam post haec modestiam, ut contentus esset.

(6) Igitur tractatis religionibus placitum *instituto flaminum* nihil demutari : sed lata lex, qua *flaminica Dialis sacrorum causa in potestate viri*, cetera promisco feminarum iure ageret.

III. Answer any *three* of the following questions :—

(1) Sketch the history of Horace's intimacy with Maecenas, illustrating by quotation from the Satires and the Odes.

(2) Give a short outline of the plan of the Aeneid, explaining clearly the national character of the poem.

(3) Who were Cicero's chief teachers in oratory and philosophy? Give an account of any two of them.

(4) Trace the stages by which Caesar and Pompey became alienated from one another.

(5) Notice any differences between the style of Cicero and that of Tacitus, illustrating as far as possible by quotation or reference.

(6) Show accurately how the position and power of Sejanus under Tiberius differed from that of (1) Maecenas, (2) Agrippa, under Augustus.

GREEK.

Wednesday, 14th October 1891.—11.30 to 1.30 o'clock.

1. (1.) Translate :—

Homer, *Iliad*, xx., 244-258.—ἀλλ' ἄγε το ἐγχείησιν.

Scan the first line and the twelfth line, and comment on any peculiarities of metre.

Write a note on ἐπέων νομός.

(2.) Write notes explanatory of the words or phrases :—

λιασθεῖς—εἰσεμάσασατο—πόλεμον μέτα θωρήσσοντο—τοσσῆσδ' ὑσμίνης ἐφέποι στόμα.

Explain the use of the Infinitive mood in Homer.

2. (1.) Translate :—

(a) Sophocles, *Œdipus Tyrannus*, ll. 320-329—

TE. ἄφες μ' ἐς οἴκουσ' ῥᾶστα γὰρ τὸ σὸν τε σὺ
κάγῳ διοίσω τοῦμόν, ἦν ἐμοὶ πίθη.

OI. οὐτ' ἐννομ' εἶπας οὔτε προσφιλέσ πόλει
τῇδ', ἢ σ' ἔθρεψε, τήνδ' ἀποστερῶν φάτιν.

TE. ὁρῶ γὰρ οὐδὲ σοὶ τὸ σὸν φώνημ' ἰδὼν
πρὸς καιρὸν* ὥς οὖν μηδ' ἐγὼ ταῦτόν πάθω.

XO. μὴ πρὸς θεῶν φρονῶν γ' ἀποστραφῆς, ἐπεὶ
πάντες σε προσκυνοῦμεν οἷδ' ἰκτῆριοι.

TE. πάντες γὰρ οὐ φρονεῖτ'. ἐγὼ δ' οὐ μὴ ποτε
τάμ', ὥς ἂν εἶπω μὴ τὰ σ', ἐκφῆνω κακά.

What are the different uses of οὐ μὴ?

(b) Sophocles, *Œdipus Tyrannus*, ll. 800-813—

τριπλῆς

ὅτ' ἢ κελεύθου τῆσδ' ὁδοιπορῶν πέλας,

ἐνταῦθά μοι κῆρυξ τε κἀπὶ πωλικῆς
 ἀνὴρ ἀπήνης ἐμβεβώς, οἶον σὺ φῆς,
 ξυνηντίαζον· κὰξ ὁδοῦ μ' ὃ θ' ἡγεμῶν
 αὐτός θ' ὁ πρέσβυς πρὸς βίαν ἤλανέτην.
 κἀγὼ τὸν ἐκτρέποντα, τὸν τροχηλάτην,
 παῖω δι' ὀργῆς· καὶ μ' ὁ πρέσβυς ὥς ὀρᾶ,
ὄχου παραστείχοντα τηρήσας μέσον
 κἀρα διπλοῖς κέντροισί μου καθίκετο.
 οὐ μὴν ἴσῃν γ' ἔτισεν, ἀλλὰ συντόμως
 σκήπτρῳ τυπεῖς ἐκ τῆσδε χειρὸς ὕπιος
 μέσης ἀπήνης εὐθὺς ἐκκυλινδεται·
 κτείνω δὲ τοὺς ξύμπαυτας.

Discuss the construction of ὄχου, and mention any other reading proposed.

3. (1.) Demosthenes, *Adv. Leptines*, §§ 98, 99. Translate from ὡς μὲν τοίνυν οὐχὶ καλῶς το ποιεῖται τὸν λόγον.

Distinguish *θεσμοθέται* and *νομοθέται*.

Summarise very briefly the argument of this passage.

(2.) Translate with short notes:—

(i) εἰ δὲ δὴ τὰ μάλιστα ἐπέλειπον οἱ χορηγεῖν οἱοί τε, πρὸς Διὸς πότερον κρεῖττον ἦν εἰς συντέλειαν ἀγαγεῖν τὰς χορηγίας ὥσπερ τὸς τριηραρχίας, τοὺς εὐεργέτας ἀφελέσθαι τὰ δοθέντα;

(ii) χρῆ γάρ, ὥς γοῦν ἐμοὶ δοκεῖ, ὅσα τις πράττει τοὺς θεοὺς ἐπιφημίζων, τοιαῦτα φαίνεσθαι οἷα μὴδ' ἂν ἐπ' ἀνθρώπου πραχθέντα πονηρὰ φανείη.

4. (1.) Plato, *Republic*, p. 362, A to B—Translate from τὸ δὲ τοῦ Αἰσχύλου το το ἀδίκειν.

From what play is the above quotation taken?

Discuss the construction of *δοκοῦντι* and *κερδαίνοντα*.

(2.) Explain the phrases—*εἰρωνεία Σωκράτους*—*εὐωχοῦ τοῦ λόγου*—*διατεθρυλημένος τὰ ὦτα*—*ἐν ὑπονοίαις πεποιημένας*. What does Socrates mean by τὸ ὡς ἀληθῶς ψεῦδος?

5. Answer any *three* of the following questions:—

1. State the arguments for and against (1) the Asiatic origin of the Homeric poems; (2) the separate authorship of the *Iliad* and the *Odyssey*.

2. What is Tragic Irony? Give illustrations from the *Ædipus Tyrannus* or any other Greek Tragedy.

3. Explain briefly the system of *λειτουργίαι* at Athens. What were the provisions of the Law of Leptines, and what was their precise bearing on these *λειτουργίαι*?

4. Enumerate the definitions of Justice successively proposed in the First Book of Plato's *Republic*. Summarise the arguments by which any one of them is supported and overthrown.

5. Of the chief states of Greece, which joined in resistance to the second Persian invasion (480-79), and which sided with the invaders or remained inactive? Tell what you know of the motives which determined their respective policies.

6. Describe the main features in the constitution of Athens at the epoch of the Persian wars.

7. Sketch the history of Attic Comedy, with dates. Indicate the political conditions corresponding to its several phases.

Wednesday, 14th October 1891.—2.30 to 4.30 o'clock.

I. Translate :—

καὶ γὰρ οὖν νῦν ὑμῖν ἔξεστιν ἀνεπιλήπτως πορεύεσθαι, ὅποι ἂν ἔλθῃτε, καὶ κατὰ γῆν καὶ κατὰ θάλατταν. ὑμεῖς δὲ, ὅτι πολλὴ ὑμῖν εὐπορία φαίνεται, καὶ πλέετε, ἔνθα δὲ ἐπιθυμεῖτε πάλαι, δέονταί τε ὑμῶν οἱ μέγιστον δυνάμενοι, μισθὸς δὲ φαίνεται, ἡγεμόνες δὲ ἤκουσι Λακεδαιμόνιοι, οἱ κράτιστοι νομιζόμενοι εἶναι, νῦν δὲ καιρὸς ὑμῖν δοκεῖ εἶναι, ὥς τάχιστα ἐμὲ κατακαίνειν. οὐ μὲν γάρ, ὅτε γε ἐν τοῖς ἀπόροις ἦμεν, ὧ πάντων μνημονικώτατοι· ἀλλὰ καὶ πατέρα ἐμὲ ἐκαλεῖτε, καὶ αἰεὶ ὥς εὐεργέτου μεμνήσθαι ὑπισχνεῖσθε. οὐ μέντοι ἀγνώμονες οὐδ' οὗτοί εἰσιν, οἱ νῦν ἤκοντες ἐφ' ὑμᾶς, ὥστε, ὥς ἐγὼ οἶμαι, οὐδὲ τούτοις δοκεῖτε βελτίους εἶναι, τοιοῦτοι ὄντες περὶ ἐμέ. ταῦτα εἰπὼν ἐπαύσατο.

2. Translate into Greek :—

And when the three kings beheld this marvel, they were sore amazed, and it greatly repented them that they had thrown away the stone ; for well they perceived that it had a great and holy meaning. So they took off that fire, and carried it into their own country, and placed it in a rich and beautiful church (*τερόν*). And there the people keep it continually burning, and worship it as a God, and all the sacrifices they offer are kindled with that fire. And if ever the fire becomes extinct (*κατασβέννυμι*), they go to other cities round about where the same faith is held, and obtain of that fire from them, and carry it to the church. And this is the reason why the people of this country worship fire.

MARCO POLO.

Tuesday, 5th April 1892.—11.30 to 1.30 o'clock.

1. Translate :—

Isocrates, *Ad Demon.*, 335-7.

2. Translate into Greek :—

But when Pelias saw him silent, he began to talk of other things, and courted Jason more and more, speaking to him as if he was certain to be his heir, and asking his advice about the kingdom ; till Jason, who was young and simple, could not help saying to himself, " Surely he is not the dark man whom people call him. Yet, why did he drive my father out ? " And he asked Pelias boldly, " Men say that you are terrible, and a man of blood ; but I find you a kind and hospitable man ; and as you are to me, so will I be to you. Yet why did you drive my father out ? "—KINGSLEY.

Tuesday, 5th April 1892.—2.30 to 4.30 o'clock.

I. Translate, with short notes on the underlined words :—

(1.) Homer, *Il.*, xx. ll. 490-503.

(2.) Scan the following lines, with notes on the metre :—

(a) *σμερδαλέα ἰάχων· ὁ δὲ χερμάδιον λάβε χειρὶ.*

(b) *ὅς μοι ἐταῖρον ἔπεφνε τετιμένον· οὐδ' ἂν ἔτι δῆν.*

(3.) Write notes on *ἑάλη*—*πτολέμοιο* *γεφύρας*—*ταλαύρινον* *πολεμιστήν*.

II. Translate, with short notes on the underlined words :—

(1.) Sophocles, *Æd. Tyr.*, ll. 634-643.

(2.) Sophocles, *Æd. Tyr.*, ll. 911-923.

III. Translate, with brief notes on the underlined words :—

Demosth., *Contra Lept.*, §§ 109 110, from "*καὶ μὴν περὶ τοῦ γε μηδὲ,*" to "*ἄξιον μείναι.*"

IV. (1.) Translate :—

Plato, *Rep.*, i. p. 349 D-E, from "*Οὐ καὶ ἡ τέχνη,*" to "*οὔτω λέγων, ἢ οὐ;*"

(2.) Translate and explain :—

Plato, *Rep.*, ii. p. 365 C, from "*οὐκοῦν, ἐπειδὴ τὸ δοκεῖν,*" to "*κερδαλέαν καὶ ποικίλην.*"

V. Answer any *three* of the following questions :—

1. What arguments are brought against the genuineness of part of *Iliad* xx.? Make some general remarks on the subject of interpolations in Homer, and the criticism that is founded on them.

2. Enumerate the sections into which a Greek tragedy may be divided, and state the general character of the metres employed in each.

3. Describe the regular procedure at Athens for passing a law. What was the *γραφὴ παρανόμων*, and illustrate its operation?

4. Summarise Plato's view of the Sophists, as shown in his picture of Thrasymachus. Contrast his representation of Socrates.

5. Describe the route pursued by Xerxes in his invasion of Greece, mentioning in order the various battles in which he, and afterwards Mardonius, engaged.

6. Sketch the career of Miltiades, giving the more important dates.

B.—DEPARTMENT OF PHILOSOPHY.

LOGIC AND PSYCHOLOGY.

Thursday, 15th October 1891.—9 to 12 o'clock.

1. Enumerate the Categories of Aristotle, and point out distinctly their *logical* significance.

2. Given the proposition, "Some political organisations ought to be condemned": what immediate inferences may be legitimately drawn

therefrom? Give the technical name of each. Can you upon any principle draw the inference, "Some political organisations ought to be commended"?

3. Distinguish between Inductive and Deductive definition. Take the following, and say in each case—(1) whether it is a proper definition or a real predication; (2) if a proper definition, to what class of definitions it belongs; (3) if defective, what rules it transgresses:—

(a) A predicable is a common univocal name of the second intention.

(b) Virtue means valour.

(c) Virtue is its own reward.

(d) A brave soul never surrenders.

4. Examine these arguments in due syllogistic fashion:—

1. A word is the embodiment of a thought; therefore, whoever uses words has thoughts corresponding to them.

2. As a man cannot be in full accord with any one but himself, he ought to confine himself to his own society.

5. What is meant by Induction? When has a Hypothesis a scientific value? State and exemplify the rules of Analogical reasoning.

6. Give a reasoned handling of the definition of Consciousness. What is meant by Subconsciousness? On what evidence does the doctrine of subconsciousness rest?

7. State clearly the various uses of the word Idea in philosophy. Give some account of Memory and its psychological significance. In what respects is it true that Memory may interpret events more accurately than present experience?

8. What are the rules to be observed in the Separation of Questions in philosophy? Exemplify in the case of Cause.

9. On what grounds was it maintained by Berkeley that our perception of distance is not original, but acquired? What is Berkeley's interpretation of an external material world?

10. Examine Locke's conception of Knowledge, in its application to the three Ontological certainties.

Wednesday, 6th April 1892.—9 to 12 o'clock.

1. What are the immediate Oppositional inferences from each of the propositions—(1) Men do not willingly suffer pain; (2) Some men have black hair?

Give, where possible, the Converse and the Obverse (permutation) of—(1) All men do not think alike; (2) It is not time misspent to visit the Museum weekly.

2. Distinguish between Inductive and Deductive Definition. What is meant by Partition? In what sphere is it specially applicable? State its rules, and exemplify. Is the Class-mark in the Natural History sciences merely a Type; and is it susceptible of definition?

3. Explain and exemplify the following fallacies, and refer each to its proper class: *Petitio principii*, *Ignoratio elenchi*, *Fallacia accidentis*,

Non causa pro causa, Post hoc ergo propter hoc. Give Bacon's classification of Fallacies, with explanation.

4. In what different senses has the word Analogy been used, and by whom? What is meant by Reasoning from Analogy? State the rules of Analogical reasoning. Give an example of good, and an example of bad, analogical reasoning.

5. Is Psychology a Science? Shape your answer so as (1) to bring out what is strictly necessary to constitute a science, (2) to meet the leading objections (which you will indicate) against the validity of the psychological method.

6. Define Sensation, and state the various marks by which you discriminate one sensation from another. Distinguish between (1) Sensation and Emotion, (2) Sensation and Perception. What is meant by the distinction between the Primary and the Secondary Qualities of Matter; and what value do you attach to it?

7. Carefully distinguish between (a) an image and a percept, (b) an image and a concept.

8. Give a clear historical handling of the meanings of Idea. What is meant by the Separation of Questions in Philosophy? Exemplify in the case of Cause.

9. What exactly was the task that Locke set himself in the *Essay Concerning Human Understanding*? What was his doctrine of Matter, and on what grounds was it attacked by Berkeley? To what sphere did he restrict the doctrine of the Association of Ideas?

10. By what lines of argument did Berkeley meet religious Scepticism? Are these sufficient to cope with the Agnosticism of the present day? Explain.

MORAL PHILOSOPHY.

Friday, 16th October 1891.—9 to 12 o'clock.

1. On what grounds may Ethics be maintained to be, in strictness, a science? In what respects is Moral Philosophy wider than Ethics?

2. Consider carefully the bearing of Biological Evolution on Ethical theory.

3. Sketch Hegel's Dialectic, and examine its relation to his Ethical Maxim.

4. In what various senses has "Freedom of the Will" been understood? What are the real difficulties attaching to the problem of Volitional Freedom?

5. What is meant by saying that "Virtue is its own reward"? How far does the view that this phrase represents express ethical truth; and in what respects does it fail?

6. What is meant by the Authority of Conscience? Whence is it derived?

It has been maintained that Conscience is a *social* product. Examine this.

7. State fully the nature and workings of Habit in the formation of moral Character. What is the relation between Moral Habit and Moral Progress?

8. Give a clear account of the teaching and position of the Sophists in ancient Greece. How far has their philosophical standpoint been accepted in modern times?

9. Sketch the Ideology of Plato, and estimate its value. Mention any modern philosophies that have shown a strong Platonic leaning.

10. How may it be said that Kant created a revolution in modern Ethical thought? Indicate the central position of his teaching.

Thursday, 7th April 1892.—9 to 12 o'clock.

1. In what respects may Ethics claim to be a Science? Distinguish between Psychology of ethics and Metaphysics of ethics, and show the bearings of the distinction by application to a concrete example. Point out the relation of Morality to Religion.

2. "Because right is right, To follow right were wisdom in the scorn of consequence." In what sense does this Tennysonian utterance express ethical truth? in what sense is it untenable?

3. On what grounds do you condemn the principle, "It is lawful to do evil that good may come"? Is malevolence an original part of human nature, or can it be resolved into some other principle—say, Love of Power? Give reasons.

4. What is meant by Habit? State its laws, and exemplify their working in the formation of Moral Character. What is Butler's doctrine of the relation between active habits and passive impressions? Exemplify this doctrine.

5. What do you understand by Egoism and by Altruism? Would pure Altruism be consistent with morality? Support your answer by reasons. Define Sympathy, and discriminate it from Compassion and from Friendship.

6. Define Happiness. What are the objections to regarding Happiness as the ultimate ethical end? What are the contrary views of the ultimate ethical end; and by what term is such an end best expressed?

7. What is meant by Pantheism? How does Pantheism regard—(1) Change, as manifested in outward Nature; (2) Sin or Evil, as seen in man? On what grounds would you meet Pantheism?

8. Indicate precisely the place of the Sophists in Greek ethical thought, and show the nature of the function that they undertook to discharge. In what respects was Socrates in sympathy with them, and in what respects was he entirely opposed? How can Neo-platonism be justly said to be a legitimate development of Platonic teaching?

9. What is distinctive in the Ethical teaching of (1) Locke, (2) Shaftesbury, (3) Butler? What is the exact value of Butler's teaching regarding Self-love and Benevolence in Sermon XI.?

10. State clearly the Ethical position of Hegel, and his relation to Kant. In what respects chiefly has Hegelianism affected recent British philosophy?

RHETORIC AND ENGLISH LITERATURE.

FIRST PAPER.

Friday, 16th October 1891.—1 to 2 o'clock.

Write an Essay on either of the following subjects, illustrating by reference or quotation :—

Shakespeare's conception of the character of Coriolanus.

The Literary Affectations satirized in *Love's Labour's Lost*.

SECOND PAPER.

Friday, 16th October 1891.—2 to 4 o'clock.

1. Sketch the history of the definitions of Rhetoric, with special reference to De Quincey's views in his Essay under that title.

2. What foreign or "non-Saxon" ingredients were there already in the English Vocabulary before the Norman Conquest? Explain how they had come in, and give examples.

3. Make out in parallel columns, and as nearly as possible in chronological order in each column, two lists—the first of the most important *English* poets between 1350 and 1580, and the second of the most important *Scottish* poets through the same range of time. Append a brief descriptive note to each name.

4. Either (*A*) Sketch the literary life of Spenser, and trace his special influence on English Poetry to as far as the Restoration; Or (*B*) Sketch, with mention of names, the course of the English Drama from 1625 to 1688.

5. Either (*A*) Recapitulate in condensed form, with quotation of a few lines if you can, the passage in Book I. of *Paradise Lost* in which Milton propounds his poetical theory of the origin of the various Pagan Polytheisms or False Religions; Or (*B*) Explain the circumstances of chief interest historically in the relations between Milton and Dryden at the time of the appearance of Milton's epic, and in connexion with it.

6. Either (*A*) Give some account of the nature of the following works, naming the authors :—*Polyolbion*, *Histrionomastix*, *Worthies of England*, *Gondibert*, *Leviathan*, *Oceana*, *The Hind and the Panther*; Or (*B*) Explain the meaning, or (as the case may be) the reference, in each of the following phrases from the prescribed readings; and explain also where each occurs, and in what context :—

(1) "A man of complements."

(2) "His face's own margent did quote such amazes."

(3) "I will something affect the letter."

- (4) "Ah ! good old Mantuan !"
- (5) "This love is as mad as Ajax : it kills sheep."
- (6) "Priscian a little scratched."
- (7) "Better wits have worn plain statute-caps."
- (8) "While greasy Joan doth keel the pot."
- (9) "The mast of some great ammiral."
- (10) "To the Dorian mood of flutes and soft recorders."
- (11) "The parching air burns frore."

7. Describe generally the chief prose-writings of Swift ; and add some remarks on the characteristic qualities of his style.

8. No. 1 of the following is a fragment of blank verse printed as prose ; and the others are lines from English poems. Rewrite No. 1 in its proper blank verse form, without changing a word or the order of the words ; and give the metrical formula and the prosodic name of each of the others :—

- (1) "We will frolic it like fairies in the moonshine when a friar jolly from some late christening sees them dancing deep in a greenwood copse, and tries to change his swagger to a churchman's gait, and racks his memory for a snatch of hymn to cause the unearthly creatures vanish."
- (2) "Among the gloomy pines of a Norwegian vale."
- (3) "Thou art fair, and few are fairer."
- (4) "Last May a braw wooer cam down the lang glen."
- (5) "Where the wild beasts find shelter, but I can find none."
- (6) "Then I awoke, and beheld the mountains in twilight before me."
- (7) "I myself must mix with action, lest I wither in despair."

FIRST PAPER.

Thursday, 7th April 1892.—1 to 2 o'clock.

Write an Essay on either of these subjects :—

The character of Don Armado in *Love's Labour's Lost*.

The character of Menenius Agrippa in *Coriolanus*.

SECOND PAPER.

Thursday, 7th April 1892.—2 to 4 o'clock.

1. Mention, in succession, the five qualities of style discussed in the Lectures, explaining each distinctively from the others.

2. Give (1) Morris's classification and enumeration of the Languages of the Teutonic stock of the Aryan family ; (2) some examples of non-Aryan words in the English vocabulary.

3. What is peculiar in De Quincey's view of the scope and nature of Rhetoric ? Give the substance of his description of Milton's style in connexion with this view of Rhetoric ; and add any relative remarks

(critical or other) suggested by your own study of the first two Books of *Paradise Lost*.

4. Give some outline of Langland's *Piers Plowman Vision*; and sketch any two of the leading Pilgrims in the *Canterbury Tales*.

5. Mention, in chronological order if you can, five of the more important English poets, and five of the more important Scottish, in the interval between Chaucer's death and the appearance of Spenser; adding a brief descriptive note to each name.

6. Name the author, or authors, and indicate the subject matter, of as many as you can of the following:—*Arcadia*, *Polyolbion*, *the Marprelate Tracts*, *Wit's Treasury*, *Groatsworth of Wit*, *The Purple Island*, *Urn-burial*, *The Rehearsal*, *The Rehearsal Transposed*, *Tenure of Kings and Magistrates*, *Leviathan*, *Oceana*, *Religio Laici*, *Cooper's Hill*, *Forth Feasting*, *Windsor Forest*, *Gondibert*, *Battle of the Books*, *The Shortest Way with Dissenters*, *Gorboduc*.

7. Sketch the purport of *The Tale of a Tub*; and comment upon it as exemplifying Swift's style.

8. What is meant by the doctrine of the Three Unities in Dramatic Poetry? Show, by examples, its influence on the English Drama of the Restoration. Is it strictly observed by Shakespeare? Exemplify from the prescribed plays.

N.B.—For the last question (No. 8) the following may be substituted:—

8. Describe the influence of Wordsworth on British poetry.

C.—DEPARTMENT OF MATHEMATICS AND PHYSICS.

MATHEMATICS.

Tuesday, 13th October 1891.—2.30 to 4.30 o'clock.

1. The exterior angle of any triangle is equal to the sum of the two interior and opposite angles, and the three interior angles are equal to two right angles.

Prove that the triangle formed by the three straight lines which bisect the external vertical angles of a given triangle is acute-angled.

2. Prove the proposition regarding the inequality of the obliques drawn from a given point to a given straight line.

Show that in any triangle the median, the bisector of the angle, and the perpendicular corresponding to the same vertex, are in order of magnitude.

3. In any triangle the sum of the squares on any two sides is double of the sum of the squares on half the base, and on the median to the base.

If BX , CY are squares on the sides BA , CA of any triangle ABC , then $BC^2 + XY^2 = 2AB^2 + 2AC^2$.

4. Define a tangent to a circle, and show that it is perpendicular to the radius drawn to its point of contact.

Show how to draw a circle of given radius to touch two given straight lines.

5. If two circles touch, the line joining their centres passes through the point of contact.

If two circles, B and C , both lie inside another, A , and both touch A and also touch each other, show that the sum of the radii of B and C is not greater than the radius of A .

6. When are two circles said to be orthogonal to each other?

If a circle is orthogonal to two given circles, show that the locus of its centre is a straight line.

To describe a circle which shall have a given radius, and shall cut two given circles orthogonally.

Or, as an alternative,

If ABC be a triangle, D, E, F three points in the sides BC, CA, AB , such that AD, BE, CF are concurrent, then

$$\frac{BD}{CD} \cdot \frac{CE}{AE} \cdot \frac{AF}{BF} = 1.$$

State and prove the converse.

If a circle touch the sides of a triangles ABC , in D, E, F respectively, show that AD, BE, CF are concurrent.

7. Show that the similar triangles are to each other in the duplicate ratio of their homologous sides.

ABC is a triangle inscribed in a circle, and the tangent at A meets BC produced at D ; prove that $CD : BD :: CA^2 : BA^2$.

8. If a plane intersect two parallel planes the lines of intersection are parallel.

A small gas jet throws the light through a rectangular window on the dark street outside. Explain why the form of the bright patch on the street is not in general rectangular; and show how to construct its outline.

9. Given that the volume of a pyramid is determined when its altitude and the area of its base are given, deduce the usual formula for calculating its volume.

Calculate the volume of the part of a cube cut off by a plane passing through three of the vertices nearest to a given vertex.

10. Show that two tangents to a parabola at the ends of a focal chord meet at right angles on the directrix; and that the focal radius drawn to their intersection is perpendicular to the focal chord.

A parabola touches a given straight line in a given point and has a given directrix: to construct its focus.

11. In a central conic, show that the foot of the perpendicular from either focus upon a tangent to the conic, lies on the circle described upon the major-axis as diameter.

Draw a tangent to a conic parallel to a given line.

12. In a triangle ABC prove that

$$a \sin B - b \sin A = 0 \text{ and } a \cos B + b \cos A = c.$$

Eliminate B from these equations.

$$\text{Show that } bc \cos^2 \frac{A}{2} + ca \cos^2 \frac{B}{2} + ab \cos^2 \frac{C}{2} = \frac{1}{4}(a+b+c)^2.$$

Wednesday, 14th October 1891.—9 to 11 o'clock.

1. Explain what is meant by the terms *rational*, *integral*, and *symmetrical*, as applied to algebraic functions.

Find the coefficients of x^3 and x^5 in the expansion in powers of x of $(1-x+x^2)^5 - (1+x-x^2)^5$.

Show that $\frac{(2y-z-x)^3 - (2z-x-y)^3}{y-z}$ is a symmetrical function of its variables x, y, z .

2. Define the *Remainder* in Algebraic Division; and show that it is unique.

Determine p and q so that $3x^4 + 2x^3 - 5x^2 + px + q$ may be exactly divisible by $x^2 - x + 1$.

Find the G.C.M. of $x^3 - 6x^2 + 8x - 3$ and $x^3 - 7x^2 + 14x - 8$.

3. If a, b, c be rational numbers, investigate the condition that $ax^2 + bx + c$ be resolvable into factors of the first degree in x whose coefficients are rational.

Resolve into their simplest factors the expressions

$$(i) 3(x+1)^2 - 8(x+1) - 3; (ii) (1-xy)^2 - (x-y)^2;$$

$$(iii) 3x^2 - 4xy + y^2 + 2x - 1.$$

4. Construct a rationalising factor for $\sqrt{p} + \sqrt{q} + \sqrt{r}$; and give the rational product which results from using it.

Express as a sum of simple surds

$$(i) (\sqrt{3} - \sqrt{5})^2 / (\sqrt{2} + \sqrt{5} - \sqrt{7});$$

$$(ii) (14 + \sqrt{192})^{\frac{3}{2}} - (14 - \sqrt{192})^{\frac{3}{2}}.$$

5. Find the value of p in order that the three equations $4x - 6y + 1 = 0$, $3x + 4y - 1 = 0$, $px - 5y + 2 = 0$, may have a common solution.

Solve the following:—

$$(i) \frac{2x+a-b}{x+a-b} + \frac{2x+b-c}{x+b-c} = 4;$$

$$(ii) \sqrt{(x^2+1)} + 3/\sqrt{(x^2+1)} - 4 = 0.$$

6. Establish the relation between the roots and coefficients of the quadratic equation $x^2 - px + q = 0$; and obtain the equation whose roots are the squares of the roots of the given equation.

Solve the equations

$$(i) (x+y)(x+y+1) = 56, (x-y)(x-y-1) = 12.$$

$$(ii) \frac{x+y}{1+xy} = a, \frac{x-y}{1-xy} = b.$$

Find the condition that the roots of the latter equation should be real.

7. Find the sum of a series in geometrical progression. Sum the series

$$1 + q(1 + q) + q^2(1 + q + q^2) + \dots + q^n(1 + q + q^2 + \dots + q^n).$$

Find an expression for the present worth of an annuity of £100 payable annually, to continue for 10 years at 3 per cent. compound interest.

8. Explain what is meant by a complex number.

If $x = \cos \theta + i \sin \theta$, $y = \cos \phi + i \sin \phi$, show that the product xy can be expressed in a similar form.

Show also that $(x - y)^2 + (x + y)^2 \tan^2 \frac{1}{2}(\theta - \phi) = 0$.

9. Assuming that $e = Lt.(1 + 1/x)^x$ when $x = \infty$, show that

$$e^x = 1 + x + x^2/2! + x^3/3! + \dots$$

Assuming that $x/(1 - e^{-x})$ can be expanded in a convergent series of ascending powers of x , determine the coefficients of x and x^2 .

Or, as an alternative,

Show that $\cos \theta$, $\sin \theta$, $\cos n\theta$, $\sin n\theta$ can be expressed in the forms $(x + 1/x)/2$, $(x - 1/x)/2i$, $(x^n + 1/x^n)/2$, $(x^n - 1/x^n)/2i$ respectively; and express x as a function of θ .

Use these formulae to expand $\cos^2 \theta \sin^4 \theta$ in a series of cosines of multiples of θ .

10. Trace the graphs of $\sec x$ and $1/(\sec x - 1)$.

Find as many solutions as you can of the equation

$$\tan \left(\frac{1}{4}\pi + x \right) = 3 \tan \left(\frac{1}{4}\pi - x \right).$$

If $A + B + C = \pi$, show that

$$\frac{1 + \cos A + \cos B - \cos C}{1 - \cos A + \cos B + \cos C} \tan \frac{1}{2} C = \tan \frac{1}{2} A.$$

11. Prove that in plane co-ordinate geometry the equation

$$Ax + By + C = 0 \text{ represents a straight line.}$$

Draw the straight lines $2x + 3y = 5$ and $3x - 5y = 0$; and obtain the equation of the straight line which passes through their intersection and is perpendicular to the line $x - 4y = 0$.

12. Find the equations to the tangent and normal at any point on the parabola $y^2 = lx$.

Show by means of your equations that the subnormal is constant, and that the subtangent is double the abscissa.

Or, as an alternative,

Show that $Lt_{x=0} (x^n - 1)/(x - 1) = n$, where n is any positive or negative

commensurable number.

Evaluate

$$(i) \int_{x=1} \frac{x^3 - 2x + 1}{x^4 - 1};$$

$$(ii) \int_{x=0} \frac{(x+1)^{\frac{3}{2}} - 1}{(x^2 + x + 1)^{\frac{1}{2}} - 1}.$$

Monday, 4th April 1892.—3 to 5 P.M.

1. The straight line joining the middle points of the sides of a triangle is parallel to the base and equal to half of it.

The straight line joining the middle points of a pair of opposite sides of a quadrilateral bisects the line joining the middle point of the diagonals.

2. Prove the theorem regarding the inequality of the perpendicular and obliques from a given point to a given straight line.

In any parallelogram the longer diagonal is that which subtends the greater angle; and this diagonal is the longest distance between two points on the perimeter of the parallelogram.

3. Prove the proposition which establishes the relation between the area of the squares described on the sides of an acute angled triangle.

A point Q is taken upon a circle at equal distances from the extremities of a diameter AB . CD is a chord parallel to AB , and P any point on AB . Shew that the sum of the squares on PC , PD is equal to twice the square on PQ .

4. Find the locus of a point which moves so that the sum of the squares on its distances from two fixed points is constant.

If P be a movable point, PS and PT the tangents drawn from it to two given circles, find the locus of P subject to the condition that $PS^2 + PT^2$ is constant.

5. Each angle contained by a tangent of a circle and a chord drawn from the point of contact is equal to the angle in the alternate segment of the circle.

C is the middle point of the arc AB of a circle, CE is any chord through C cutting the straight line AB in D . Shew that CB touches the circle passing through the points B , D , E .

6. Prove the fundamental property of the radical axis (or axis of equipollence) of two circles; and shew that the three radical axes of three circles taken in pairs are concurrent.

To describe a circle which shall pass through two given points and touch a given straight line. Indicate how many solutions there are in general; and point out a case in which your construction fails.

7. Shew that a circle in general inverts into a circle.

Invert the theorem that all the radii of a series of concentric circles cut them orthogonally.

Or, as an alternative,

Prove that the cross ratio of the four points in which a given pencil of four rays meets any transversal is constant.

Give a linear construction for the fourth ray of a harmonic pencil three of whose rays are given.

8. If two triangles are equi-angular, they are similar.

ABC is an equilateral triangle; $ACDE$ a square described externally on AC . BD meets the perpendicular from A on BC in L . Calculate the distance AL , BC being 5 inches.

9. The rectangle under the diagonals of a cyclic quadrilateral is equal to the sum of the rectangles under its opposite sides.

If P be any point on the circumference of a circle circumscribing a regular pentagon $ABCDE$, on the side of AE remote from C , then

$$(PA+PE)(PB+PD)=PC^2.$$

10. Shew that a common perpendicular can always be drawn to two given non-intersecting straight lines; and that this perpendicular is the shortest distance between the lines.

The middle points of two opposite edges of a triangular pyramid are co-planar with the middle points of two other opposite edges and form a parallelogram with them.

11. If the normal to any conic at P meet the major axis in G , shew that $FG=eFP$.

A conic whose focus and eccentricity are given, touches a given straight line at a given point; shew how to construct its directrix and its major axis.

12. Shew that in any triangle ABC

$$a/\sin A = b/\sin B = c/\sin C = 2Rr.$$

Find the distances of the orthocentre from the angular points of the triangle, and shew that, if α, β, γ be the distances of the inscribed from escribed centres, then

$$a/\sin \frac{A}{2} = \beta/\sin \frac{B}{2} = \gamma/\sin \frac{C}{2} = 4R.$$

Tuesday, 5th April 1892.—9 to 11 o'clock.

1. Find the coefficient of

$$x^5 \text{ in } (1-x)^{10}; \text{ and in } (1-x+x^2-x^3)^4.$$

When is an integral function said to be (1) homogeneous (2) symmetrical?

Construct a homogeneous symmetrical function of x and y of the second degree which shall vanish when $x=2, y=2$, and have the value 1 when $x=4, y=2$.

2. Investigate the condition that a rational integral function of x of the third degree should have a factor $x-a$, and state the theorem generally.

Resolve into factors

$$(1) 1+ax-x^2-ax^3; \quad (2) x^3-3x^2+2; \\ (3) (a^2-bc)^2(b-c)+(b^2-ca)^2(c-a)+(c^2-ab)^2(a-b).$$

3. Prove the rule for finding the highest common factor of two quantities.

Find the highest common factor of

$$10x^4-7x^3+x^2 \text{ and } 4x^4-2x^3-2x+1.$$

Reduce to a single fraction

$$\frac{4}{x^2-5x+6} - \frac{3}{x^2-4x+3} + \frac{2}{x^2-3x+2}$$

4. Find the condition that the roots of the quadratic equation $x^2+px+q=0$ should be real.

Shew that if x be real, the expression $\frac{x^2-6x+5}{x^2+2x+1}$ can never be less than $-\frac{1}{3}$.

Solve the equations

$$x^2+xy+x=14, y^2+xy+y=28.$$

5. Shew that the product of any number of complex numbers is a complex number whose modulus is the product of the moduli and whose amplitude is the sum of the amplitudes of the factors. Deduce De Moivre's Theorem.

Expand $\cos^3\theta \sin^2\theta \sin 2\theta$ as a sum of sines of multiples of θ .

6. Find the sum of the first powers and of the squares of the first n natural numbers.

Find the sum of

$$1^2+3^2+5^2+\dots \text{ to } 2n-1 \text{ terms.}$$

7. Find the number of combinations of n things taken r at a time.

There are n points in a plane, no three of which lie on a straight line, except m which lie in one straight line. Find the number of lines joining the points.

8. Prove the formulae

$$\log_a(m/n) = \log_a m - \log_a n \quad \log_b m = \log_a m / \log_a b.$$

If an annuity of £ A to last for $n-1$ years be worth three-fourths as much as an annuity of the same amount to last for $2n-2$ years (the first instalment in each case to be due a year hence), find the value of n . Given that the rate of compound interest is 5 per cent. per annum; also $\log 3 = .4771213$, $\log 35 = 1.5440680$.

9. Prove that $L(\sin \theta/\theta) = 1$ and also $L(\tan \theta/\theta) = 1$ when $\theta = 0$.

Evaluate

$$\lim_{x \rightarrow 1} \frac{L(x^m + x^n - 2)}{(x^m - x^n)}$$

and also

$$\lim_{x \rightarrow 0} \frac{L\{\sqrt{(1+x^2)} - \sqrt{(1-x^2)}\}}{\{ \sqrt{(1+x)} - \sqrt{(1-x)} \}}.$$

10. Assuming the expansions of $\cos(\alpha+\beta)$ and $\cos(\alpha-\beta)$ in terms of sines and cosines of α and β , shew that

$$\sin \alpha - \sin \beta = 2 \cos \frac{\alpha+\beta}{2} \sin \frac{\alpha-\beta}{2},$$

$$\cos \alpha - \cos \beta = 2 \sin \frac{\alpha+\beta}{2} \sin \frac{\beta-\alpha}{2}.$$

Solve the equation

$$\sin x - \cos 2x = \sin 3x - \cos 4x.$$

Prove that if α, β, γ are any three angles,

$$\Sigma \sin (\alpha + \beta) \{ \sin \beta - \sin \alpha \} = \sin (\alpha + \beta + \gamma) \Sigma \sin (\alpha - \beta).$$

11. Shew that $(Ax + By + C) + k(A'x + B'y + C') = 0$ represent a straight line passing through the intersection of

$$Ax + By + C = 0, A'x + B'y + C' = 0,$$

k being any constant.

A and B are points on the axes of x and y such that $OA = a, OB = b$. $BOAC$ is a rectangle, and OK is perpendicular to AB . Find the equation to CK .

12. Prove the power theorem for conics generally; and deduce the equation to a central conic when the axes are a pair of conjugate diameters.

Or, as an alternative,

Prove geometrically that the equation to the hyperbola referred to its asymptotes is $xy = \frac{1}{4}(a^2 + b^2)$.

Shew by means of the equation to the tangent of the hyperbola that the tangent includes a constant area with the asymptotes.

NATURAL PHILOSOPHY.

Thursday, October 15th, 1891.—1 to 4 o'clock.

Six questions, at most, to be answered under each of **A** and **B**; and the answers to be made up in separate parcels, marked **A** and **B** respectively.

A

1. Show how to find the relative motions of any set of bodies with regard to one of their number.

A body is approaching an observer with a velocity due east. In what direction will it appear to move if the observer is himself moving due north with an equal speed?

2. Define Inertia as a property of matter, and explain how it manifests itself in a body at rest and in motion respectively.

Find the horizontal pressure on the rails when a 20-ton engine runs, at 50 miles an hour, on a curve of a mile radius. Specify the units in which your answer is given.

3. Two unlike parallel forces, of 1 and 2 units respectively, act upon a rigid body at points one foot apart. Find the magnitude and point of application of their resultant.

4. A stone is projected from a point in a horizontal plane, with a velocity of 100 feet per second, and with an elevation of 45° . Find the range and time of flight, neglecting the resistance of the air.

5. Find the average force which will bring to rest, in 2 feet, an

ounce bullet, moving at the rate of 1500 feet per second. How long will it take to bring it to rest?

6. Find the relation of the power to the weight in the screw, neglecting friction.

7. State the law of Gravitation.

Find the time it would take a particle to fall a distance of 32 feet from rest, under the attraction, near the surface, of a planet, whose density is twice that of the earth, and whose radius is $\frac{1}{2}$ of the earth's radius. (Take $g=32$.)

8. Define the moment of inertia of a rigid body about an axis.

A system consists of two masses of 1 and 4 pounds respectively, connected with a light rigid rod 5 feet long, and is rotating uniformly about its centre of gravity under no forces three times in a second. Determine its kinetic energy.

9. Define specific gravity and density.

A certain mass of liquid whose specific gravity is 0.5 is mixed, without suffering contraction, with four times the mass of a second liquid, whose specific gravity is 1.25; find the specific gravity of the mixture.

10. A rectangular board is immersed in water, with one of its longer edges parallel to the surface, and at a given depth. Compare the whole pressures on the board when it is (1) horizontal, (2) vertical and upwards, (3) vertical and downwards.

11. Define the terms Ecliptic, Equator, First point of Aries. Explain, and illustrate by a diagram, for a place within the arctic circle, the variations in the length of the day and night throughout a year.

12. What is meant by the moon's Librations? Describe the appearance of the earth as seen from the moon, during a month.

B

13. Define True and Average Compressibility. State how the True Compressibility of water is affected by pressure and by temperature respectively.

14. In some theories of capillarity it is asserted that there is a very great molecular pressure in liquids.

Why is this not capable of detection by ordinary experimental methods?

15. Why is the speed of sound affected by the temperature of the air, and not by its pressure?

16. Why is the Specific Heat at constant pressure, in a gas, greater than that at constant volume:—and how can these quantities be measured?

17. Define the thermal conducting power of an isotropic solid; and state the general laws of the propagation of a periodic change of surface temperature into the earth's crust.

18. What is meant by the Absolute Zero of Temperature, and how is its existence demonstrated?

19. Describe, generally, the action of each of the lenses of an Opera-glass:—and show how the magnifying power of the combination is to be calculated.

20. What are the precautions required for the production of a pure spectrum by means of a prism?

21. Give a general account of the phenomenon of double refraction, and of the mode in which it is explained.

22. Define the capacity of a Leyden Jar; and describe an experimental process for measuring it.

How does the energy of a given charge of electricity depend upon the capacity of the conductor which contains it?

23. State the general principles on which to proceed in arranging a number of voltaic cells, so that the greatest possible current shall be produced in a given wire.

24. What is the construction of a Dipping-Needle, and how is it adjusted for an observation? Describe generally the courses of the lines of equal dip on a terrestrial globe.

[For the Neil-Arnott Prize the following questions are to be answered, in addition to eight (at most) of the preceding.]

(a) What are the causes of Long and Short Sight? How are these defects practically remedied, and what is the theory of the process?

(β) Explain how a Limpet attaches itself to a rock.

(γ) How can we occasionally determine the size of the particles in a thin cloud?

(δ) Explain the scientific basis of the search for a bullet in the body by means of a telephone.

(ε) Approximate to the bulk (in cubic feet) of a man of 15 stone, explaining the physical bases of your calculation.

(ξ) State, generally, the causes which set a limit to the possible magnifying power of a microscope.

Wednesday, 6th April 1892.—1 to 4 o'clock.

[SIX questions ONLY to be answered under each of A and B, and the answers to be made up in SEPARATE packets.]

A

1. Compare the momentum, and the energy, of a cricket-ball (5·5 oz.), whose speed is 120 feet per second, with those of a golf-ball (0·1 lb.), whose speed is 400 feet per second.

2. On what principles can we determine completely the motion of a projectile consisting of two equal masses connected by a light chain? If a light spiral spring were substituted for the chain, what further principle would be required?

3. If a slab, resting on an inclined plane, be attached by an extensible cord to a point in the plane, show how to find the highest and lowest positions of equilibrium.

4. What is the resultant of simultaneous velocities, represented in magnitude and direction by the bisectors of the sides of a triangle drawn *from* the various angles? Solve the same question for the bisectors of the *angles* (each terminated at their point of intersection).

5. Find the direction and magnitude of the acceleration in uniform circular motion. When the periodic time is directly as the radius, how does the acceleration depend on the radius?

6. Define Simple Harmonic Motion, and describe a means of giving to a particle two such motions, of different periods and in directions perpendicular to one another. Describe generally the nature of the resultant motion when the periods are very nearly equal.

7. Point out clearly why a solid cylinder rolls down an inclined plane in less time than does a hollow cylinder of equal mass.

8. Find the total (not the resultant) pressure on a sphere immersed in water; and show that it is double of that on a disc of equal radius and with its centre at the same level.

9. What is meant by the height of the homogeneous atmosphere, and how can we approximate to its value? State the physical principles involved in the process.

10. A hollow cylindrical jar floats, upright, in a liquid, with $\frac{2}{3}$ of its length immersed. When 10 lbs. of water are poured into it, $\frac{5}{6}$ of its length are immersed, and the liquids outside and inside stand at the same level. Find the weight of the cylinder, and the specific gravity of the liquid in which it floats.

11. If we could see, at once, the positions which the sun occupied at noon on each day of the year, how would they be distributed in the sky? Assign the causes of this distribution.

12. Explain how the sun's distance may be approximately found from observations of one of the minor planets, made at one station and on one day.

B

1. State the law of gravitation.

Assuming any results of pure mathematics, explain, in detail, the steps of the reasoning by which it is shown that this law is in agreement with the planetary motions.

2. The "angle of contact" of mercury and glass, exposed to air, is 135° . Describe any experimental method of ascertaining this, and show how it explains the behaviour of mercury in capillary tubes, immersed in a vessel containing it.

3. Explain the characteristic differences between a gas, a vapour, and a saturated vapour. Use a "Watt's" diagram to show the nature of an isothermal, (1) for a gas, (2) for a vapour.

4. Explain the theoretical limit to the efficiency of a heat-engine.

5. The latent heat of fusion of ice is 80, and of evaporation is 537. Explain what is meant by these statements.

In what proportions must steam at 100° C. be mixed, in a closed vessel, with ice at 0° C., to produce water at 50° C., supposing that 10 per cent. of the heat is lost by radiation before the process is complete?

6. A person can see distinctly objects at any distance exceeding 30 inches. To what extent will a convex lens of 30 inches focal length extend his range of vision?

7. Describe and explain, by means of a diagram, any experiment to show interference of light.

8. If an incandescent body gives a continuous spectrum, with dark lines, what inference can be drawn as to its constitution? Describe any analogous phenomenon in the theory of sound.

9. Explain how sound is propagated. Why is it that the velocity of sound in a gas is not affected by a change of pressure, if the temperature remains unchanged?

10. An open organ-pipe, 2 feet long, is sounding its fundamental note. Calculate the number of vibrations of the air per second, assuming that the velocity of sound is 1100 feet per second.

11. A body, charged with electricity, is placed inside and insulated from a hollow, closed, insulated conductor. Describe the nature and the amount of the charge induced upon the conductor, and describe a method of verifying the fact.

12. Describe the chief methods of producing electric currents. Define the terms—resistance, electromotive force, and intensity of current; and explain how they are connected together, and how the unit in each case is defined.

EXAMINATIONS IN ARTS FOR HONOURS.

A.—DEPARTMENT OF CLASSICAL LITERATURE.

LATIN.

Friday, 8th April 1892.—9 to 12 o'clock.

I. For Latin prose :—

What, among polished nations, is called speculative reasoning or research, is altogether unknown in the rude state of society, and never becomes the occupation or amusement of the human faculties, until man be so far improved as to have secured, with certainty, the means of subsistence, as well as the possession of leisure and tranquillity. The thoughts and attention of a savage are confined within the small circle of objects immediately conducive to his preservation or enjoy-

ment. Every thing beyond that escapes his observation, or is perfectly indifferent to him. Like a mere animal, what is before his eyes interests and affects him ; what is out of sight, or at a distance, makes little impression. When, on the approach of evening, a Caribbee feels himself disposed to go to rest, no consideration will tempt him to sell his hammock. But, in the morning, when he is sallying out to the business or pastime of the day, he will part with it for the slightest toy that catches his fancy. At the close of winter, while the impression of what he has suffered from the rigour of the climate is fresh in the mind of the North American, he sets himself with vigour to prepare materials for erecting a comfortable hut to protect him against the inclemency of the succeeding season ; but, as soon as the weather becomes mild, he forgets what is past, abandons his work, and never thinks of it more, until the return of cold compels him, when too late, to resume it.—ROBERTSON.

II. For translation :—

(a.) Cicero, *De Divinatione*, i. 56, secs. 127-8, from “Praeterea quum fato,” to “aut coniectura praesentit.”

(b.) Lucretius, v. 1136-1147, from “Ergo regibus occisis,” to “leges artaque iura.”

Friday, 8th April 1892.—1 to 4 o'clock.

Translate, with short notes where necessary :—

1. (a) Plautus, *Pseud.*, ii. i. 1-8, from “Pro Iuppiter, ut mihi,” to “perduellis meis perfidiis.”

(b) Terence, *Phormio*, 51-62, from “GE. Siquis me,” to “operam tibi dico.”

2. Horace, *Epode*, iv. ll. 7-20, from “Videsne, Sacram metiente,” to “hoc tribuno militum?”

3. Martial, x. 70, from “Quod mihi vix,” to “Potite, liber?”

Adopt any reading you prefer for “choreae.”

4. Juv., *Sat.*, vii. 106-123, from “Dic igitur,” to “ex foedere pragmaticorum.”

5. Cicero, *Ep. ad Att.*, iv. 15, secs. 7-9, from “Sequere nunc me,” to “iudicio valde laborabit.”

6. Tacitus, *Ann.*, xiv. 61, from “Iamque et Palatium,” to “illi maritum daturos.”

Saturday, 9th April 1892.—9 to 12 o'clock.

I. Translate and comment on the following :—

(a) Lurco autem tribunus pl., qui magistratum simul cum lege Aelia iniit, solutus est et Aelia et Fufia, ut legem de ambitu ferret, quam ille bono auspicio claudus homo promulgavit : ita comitia in a. d. vi. Kal. Sext. dilata sunt.

(b) Quid plura de iudicibus? Duo praetorii sederunt, Domitius Calvinus, is aperte absolvit, ut omnes viderent, et Cato, is diribitis tabellis de circulo se subduxit et Pompeio primus nunciavit.

(c) Isdem consulibus ludi saeculares octingentesimo post Romam conditam, quarto et sexagesimo quam Augustus ediderat spectati sunt. Utriusque principis rationes praetermitto, satis narratas libris quibus res imperatoris Domitiani composui. Nam is quoque edidit ludos saeculares iisque intentius adfui sacerdotio quindecimvirali praeditus ac tunc praetor.

(d) Pari ignominia Valerius Ponticus adfcitur, quod reos, ne apud praefectum urbis arguerentur, ad praetorem detulisset, interim specie legum, mox praevaricando ultionem elusurus. Additur senatus consulto, qui talem operam emptitasset vendidissetve, perinde poena teneretur ac publico iudicio calumniae condemnatus.

II. Translate and comment on the following :—

(a) Gr. Quid perdidisti?

La. Vidulum cum auro atque argento multo.

Gr. Ecquid meministi in vidulo qui periit quid ibi infuerit?

La. Quid refert qui periit?

Gr. Tamen—

La. Sine : aliud fabulemur.

Gr. Quid si ego sciam qui invenerit? volo ex te scire signa.

La. Nummi octingenti auri probi in marsuppio infuerunt, Praeterea centum tetrachuma Philippa in pasceolo sorsus.

(b) Da lunae propere novae

Da noctis mediae, da, puer, auguris

Murenæ.

(c) Hellade percussa Marius cum praecipitat se,
cerritus fuit? an commotae crimine mentis
absolves hominem et sceleris damnabis eundem,
ex more imponens cognata vocabula rebus?

How does Horace work out the line of thought in the Satires?

(d) Difficile est proprie communia dicere.

III. Translate and comment on the following :—

(a) Cedamus patria : vivant Artorius istic
Et Catulus ; maneant qui nigrum in candida vertunt,
Queis facile est aedem conducere, flumina, portus,
Siccandam eluviam, portandum ad busta cadaver,
Et praebere caput domina venale sut hasta.

(b) Perituros audio multos.

Nil dubium, magna est fornacula : pallidulus mi
Brutidius meus ad Martis fuit obvius aram.
Quam timeo, victus ne poenas exigit Ajax
Ut male defensus !

- (c) Hinc quoque deceptus Memphitica templa frequentat,
Assidet et cathedris, moesta iuvenca, tuis.
Inde petit centum pendentia tecta columnis,
Illinc Pompeii dona nemusque duplex.
Nec Fortunati spernit nec balnea Fausti,
Nec Grylli tenebras Aeoliamque Lupi.
- (d) Iam prope desertos cineres et sancta Maronis
Nomina qui coleret pauper et unus erat.
Silius optatae succurrere censuit umbrae
Silius et vatem non minus ipse tulit.

Adopt any reading you prefer in the last two lines.

IV. Answer *five* of the following questions :—

(1.) Sketch, and illustrate from the letters, Cicero's political attitude in the years that intervened between the First Triumvirate and the outbreak of the Civil War. What changes took place from time to time in his feelings towards Cæsar and Pompey?

(2.) Describe the most important changes introduced by Augustus, distinguishing the conservative from the innovating elements in his policy.

(3.) Explain clearly the objects of L. Drusus the younger, and mention the principal measures by which he tried to attain them.

(4.) Show how the employment of military force gradually superseded constitutional methods in the political struggles from the time of Ti. Gracchus to that of Cæsar.

(5.) Give some account of the development of historical writing at Rome, showing particularly the position which Tacitus holds among Roman historians.

(6.) What were the chief schools of philosophy at Rome in Horace's day? Describe his attitude towards them, and compare it with that of Juvenal.

(7.) Compare the comedy of Plautus with that of Terence, and discuss their relation to the Attic comedy.

(8.) Explain with special reference to Martial (1) the development of the literary epigram, (2) its proper function and subject.

(9.) "Et nova fictaque nuper habebunt verba fidem si Graeco fonte cadent parce detorta." Translate this, and show to what extent the licence was used by the earliest Roman writers in epic, tragic, and comic poetry.

(10.) Sketch the life of Juvenal, with as many illustrations as possible from the Satires.

(11.) Illustrate the system of Roman provincial government by giving an account of the condition and administration of any one province in the first century A.D.

GREEK.

Monday, 11th April 1892.—9 to 12 o'clock.

I. For Greek prose :—

It is of singular use to princes if they take the opinions of their council both separately and together ; for private opinion is more free,

but opinion before others is more reverend. In private, men are more bold in their own humours, and, in consort, men are more obnoxious to others' humours, therefore it is good to take both—and of the inferior sort, rather in private to preserve freedom,—of the greater, rather in consort to preserve respect. It is in vain for princes to take counsel concerning matters, if they take no counsel likewise concerning persons—for all matters are as dead images, and the life of the execution of affairs resteth in the good choice of persons; neither is it enough to consult concerning persons, “*secundum genera*” as in an idea of mathematical description, what the kind and character of the person should be; for the greatest errors are committed, and the most judgment is shown, in the choice of individuals. It was truly said, “*Optimi consilarii mortui*”—“Books will speak plain when counsellors blanch,” therefore it is good to be conversant in them, especially the books of such as themselves have been the actors upon the stage.—BACON.

2. Translate into English:—

Aristoph., *Vesp.*, 1036-1050, from “*τοιούτον ἰδὼν τέρας*,” to “*τὴν ἐπίνοιαν ξυνέτριψεν*.”

Monday, 11th April 1892.—1 to 4 o'clock.

Translate, with very short notes where necessary:—

1. Homer, *Od.*, v. 474-493, from “*ὦς ἄρα οἱ*,” to “*φίλα βλέφαρ' ἀμφικαλύψας*.”

2. Sophocles, *Antig.*, 1064-1083, from “*ἀλλ' εὖ γέ*,” to “*ἐστιούχον ἐς πόλιν*.”

3. Theocritus, *Idylls*, xiv. 39-56, from “*μάστακα δ' οἶα*,” to “*τις ὥς στρατιώτας*.”

Write notes on the proverbial expressions.

4. Thucyd., viii. 46, from “*γενόμενης δ' ἂν*,” to “*ἐξέλωσι, μὴ ἐλευθερώσαι*.”

Discuss the clause *ἢν μὴ ποτε αὐτοὺς μὴ ἐξέλωσι*.

5. Plato, *I'haedr.*, p. 265 C, from “*ΣΩ. Ἐμοὶ μὲν*,” to “*Ἀληθέστατα λέγεις*.”

Explain briefly the two processes here indicated.

6. Aristotle, *Poet.*, c. 16, from “*τετάρτη δὲ ἡ*,” to “*αἱ ἐκ συνλογισμοῦ*.”

Enumerate the other kinds of *ἀναγνώρισις*.

Unseen Passage.

Translate:—

Plato, *Timaeus*, c. 16, from “*Τὰς μὲν δὴ*,” to “*κατὰ φύσιν πρόσθεν*.”

Monday, 11th April 1892.—1 to 4 o'clock.

I. 1. Translate with notes bearing on questions of Homeric syntax:—

(a) *ἀλλ' ὅμοσαν μὴ μητρὶ φίλῃ τάδε μυθήσασθαι*.

Cobet—*μυθήσεσθαι*.

(b) ὃς καὶ νῦν πόντονδε βαλὼν βέλας ἤγαγε νῆα
αὐτὶς ἐς ἡπειρον, καὶ δὴ φάμεν αὐτόθ' ὀλέσθαι.
Cobet—ὀλεῖσθαι.

(c) ἡ γὰρ μιν ζῶόν γε κιχήσεται, ἡ κεν Ὀρέστῃς
κτεῖνεν ὑποφθάμενος· σὺ δέ κεν τάφου ἀντιβολήσῃς.

(d) ῥεῖα θεὸς γ' ἐθέλων καὶ τηλόθεν ἄνδρα σαώσαι.

What do you take to be the original meaning of the Optative?

(e) ἀλλ' ἔτι μὲν μιν φημι ἄδην ἐλάναι κακότητος.

(f) ἀτὰρ χεῖρεσσι νέων ἐπιμαίεο νόστου
γαλῆς Φαιήκων.

(g) λίσσομαι ἡμὲν Ζηνὸς Ὀλυμπίου ἡδὲ Θέμιστος.

(h) ἡ νῦν δὴ Τροίηθεν ἀλώμενος ἐνθάδ' ἰκάνεις
νῆί τε μαλ' ἐτάροισι πολὺν χρόνον;

(i) Οὐτὶν ἐγὼ πύματον ἔδομαι μετὰ οἷς ἐτάροισι.

(k) ἐκτελέσειεν ἀέθλους
πολλούς, τοὺς Φαίηκες ἐπειρήσαντ' Ὀυσηῶς.

2. Translate and comment briefly on :—

(a) οὐδενὶ μοιριδία τίσις ἔρχεται

ῶν προπάθῃ τὸ τίειν·

ἀπάτα δ' ἀπάταις ἐτέραις ἐτέρα

παραβαλλομένα πόνον, οὐ χάριν, ἀντιδίδωσιν ἔχειν.

(b) ὡς εὐτ' ἂν τὸ νέον πάρῃ κούφας ἀφροσύνας φέρον,
τίς πλάγχθη πολὺμοχθος ἔξω, τίς οὐ καμάτων ἐνι;

(c) ὡς αὐτῷ κατὰ θυμὸν ὁ παῖς πεποναμένος εἶη,
αὐτῷ δ' εὖ ἔλκων ἐς ἀλαθινὸν ἄνδρ' ἀποβαλεῖ.

(d) *Coryd.* κ' ὥχεται ἔχων σκαπάναν τε καὶ εἰκατι τουτόθε μῆλα.

Batt. πείσαι τοι Μίλων καὶ τὼς λύκος αὐτίκα λυσσῆν.

To what extent does the general line of argument which has been urged against the unity of the *Iliad* apply also to the *Odyssey*?

II. 1. Translate and comment briefly on :—

(a) καὶ τὰς πρῶρας τῶν νεῶν ξυντεμόντες ἐς ἑλασσον στερίφωτέρας
ἐποίησαν, καὶ τὰς ἐπωτίδας ἐπέθεσαν ταῖς πρῶραις παχείας, καὶ ἀντήριδας
ἀπ' αὐτῶν ὑπέτειναν πρὸς τοὺς τοίχους ὡς ἐπὶ ἔξ πῆχεις, ἐντὸς τε καὶ
ἔξωθεν.

(b) ἄνδρες γὰρ ἐπειδὴν ὦ ἀξιούσι προὔχουν κολουθῶσι, τό γ' ὑπόλοιπον
αὐτῶν τῆς δόξης ἀσθενέστερον αὐτὸ ἑαυτοῦ ἐστὶν ἢ εἰ μὴδ' ὥϊήθησαν τὸ
πρῶτον.

(c) ὀλόκληρα δὲ καὶ ἀπλᾶ καὶ ἀτρεμῇ καὶ εὐδαίμονα φάσματα μυούμενοί
τε καὶ ἐποπτεύοντες ἐν αὐγῇ καθαρᾷ, καθαροὶ ὄντες καὶ ἀσημαντοὶ τούτου, δ
νῦν σῶμα περιφέροντες ὀνομάζομεν, ὁστρέου τρόπον δεδεσμευμένοι.

(d) οἱ μὲν γὰρ ἀρχαῖοι πολιτικῶς ἐποίουν λέγοντας, οἱ δὲ νῦν ῥητορικῶς.

(e) λίαν δῆλον ὅτι ἡ ἅπαντα μιμουμένη φορτικὴ ὡς γὰρ οὐκ αἰσθανομένων
ἂν μὴ αὐτὸς προσθῇ, πολλὴν κίνησιν κινεῖται, οἷον οἱ φαῦλοι αὐλῆται
κυλιόμενοι, ἂν δίσκον δέῃ μιμεῖσθαι, καὶ ἔλκοντες τὸν κορυφαῖον, ἂν
Σκύλλαν αὐλῶσιν.

2. Quote or indicate Aristotle's definitions of *τραγωδία*—*ἦθος*—*διάνοια*—*περιπέτεια*. In what sense does he use the adjective *ἐπεισοδιώδης*?

III. 1. Write notes on the forms of the following words, and where you can give cognate words in other languages :—*ἐείκοσι*—*ἀμφιέπον*—*ἡίθεος*—*πόλιος*—*δείδω*—*εἰκνία*—*ταρπήμεναι*—*θήομεν*—*πίσυρες*—*πρειγευτάνς*—*διδόασι*—*βάλοισθα*—*τεῖν*—*ἰών* (Boeotian)—*oboeidio*—*levis*—*adepts*—*damnum*—*hariolus*—*cavere*—*ursus*—*umerus*—*viderim*—*pucnandod*—*agier*—*sudor*.

2. Compare Greek and Latin in respect of the use of—(a) spirants, (b) diphthongs.

3. Explain the Aorist formation in the Greek verb.

IV. Answer any *two* of the following :—

(a) What different views of Rhetoric are presented in Plato? Can they be harmonised? Show the relation in which Aristotle's *Rhetoric* stands to the *Phaedrus*.

(b) Give a brief sketch of the life of Sophocles; mention the improvements in the dramatic art which he introduced, and compare his merits as a dramatist with Aeschylus and Euripides.

(c) Indicate the ethical and political ideas underlying the work of Thucydides.

V. Answer any *two* of the following :—

(a) Narrate the events which led to the Athenian interference in Sicily.

(b) Describe the constitution of Sparta, giving the approximate date of its origin, and mentioning the main changes introduced down to the battle of Chaeronea.

(c) Show in detail the effect of exile in its different forms on Greek politics.

B.—DEPARTMENT OF PHILOSOPHY.

LOGIC, PSYCHOLOGY, AND METAPHYSICS.

FIRST PAPER.

Friday, 8th April 1892.—9 to 12 o'clock.

1. Locke said :—“God has not been so sparing to men to make them barely two-legged creatures, and left it to Aristotle to make them rational. . . . God has been more bountiful to mankind than so. He has given them a mind that can reason, without being instructed in methods of syllogizing.” Point out the historical circumstances that led to, and gave force to, the remark in the first part of this quota-

tion. Show clearly (1) the amount of truth there is in the second part, and (2) wherein the position is entirely wrong. Give other examples, from the history of Logic, of thinkers holding similar views to Locke's.

2. Logic has been called a *normative* science. What precisely is meant by this? Give other examples of normative sciences. What valuable additions have been made to Formal Logic since Aristotle's day? On what grounds may it be maintained that Logic is a progressive science?

3. Given the proposition, "Only Protestant princes can sit on the Throne of England," what is the logical relation between it and each of the following?—

- (1) Roman Catholic princes cannot sit on the Throne of England.
- (2) No prince who can sit on the Throne of England is a Roman Catholic.
- (3) Roman Catholic princes are excluded from sitting on the Throne of England.
- (4) Protestant princes can sit on the Throne of England.
- (5) Some who are excluded from sitting on the Throne of England are Roman Catholic princes.

4. Discuss the two logical questions:—(1) What is the guarantee of Immediate Inference? (2) Does the subject of a categorical proposition logically imply existence?

5. In what sense may Inductive Logic be traced back to Socrates? Is reasoning from Analogy a truly Inductive process? Give reasons for your answer. What are the inductive difficulties in arguing from a negative? Accompany your answer with appropriate examples.

6. "The reason why we place any credit in witnesses and historians, is not derived from any *connection* which we perceive *à priori* between testimony and reality, but because we are accustomed to find a conformity between them." Use this text as the basis of an exposition of the nature and rules of Historical Evidence.

SECOND PAPER.

Friday, 8th April 1892.—1 to 4 o'clock.

1. Distinguish between Rational and Empirical Psychology. What is meant by the Unity of the Mind? How far is it a valid objection to the scientific character of Psychology (1) that in dealing with Mind, we have not, as we have with Matter, the power of indefinite experimentation; (2) that states of Mind are evanescent; (3) that, in the very act of attending to our mental states, we transform them?

2. Is there an activity of attention? Carefully examine, in view of recent discussions, the place of Attention in a psychological scheme.

3. Give a reasoned answer to the question, What is the relation

between Psychology and Epistemology? * Show in what different ways the problem of an External World is viewed by psychology, by epistemology, and by ontology.

4. Give a clear historical account of the meanings of "Idea," with distinct reference to the Intellectual Controversies that have raged around the term.

5. What is the distinction between the psychological and the metaphysical treatment of Space? What is your opinion, with reasons, of each of the following doctrines of Space:—(1) Kant's, (2) Professor Bain's, (3) the doctrine (*e.g.*, Dr James Ward's) that emphasizes Extensity of sensation?

6. State Aristotle's doctrine of Pleasure and Pain, with historical references to other doctrines on the same subject. Indicate your own view. Do pleasures differ from each other qualitatively? Give reasons for your answer.

7. What is meant by Philosophical Scepticism? Examine critically Hume's "Sceptical solution of sceptical doubts."

THIRD PAPER.

Saturday, 9th April 1892.—9 to 12 o'clock.

1. Trace in detail the Dialectic method of Plato, and compare it with that of Aristotle. How does it stand related to the Hegelian process?

2. When did the Realist controversy arise in philosophy, and whence did it take its origin? Why was Realism accepted as the orthodox doctrine of Mediaeval times? Indicate any traces of Realism that may be detected in British philosophy at the present day.

3. Give a careful statement of the Ontological argument, as used by different thinkers, and examine its validity.

4. Examine critically Locke's "demonstration of the existence of God," and, in doing so, consider carefully whether it is consistent with his account of the origin of our ideas and knowledge, especially of our ideas of Causality and Power.

5. State clearly the problem of philosophy, as formulated by Hume, that Kant set himself to answer; and argue the question, Whether Kant's answer is really effective? On what grounds may it be maintained that Kant and Hume are alike Agnostics?

6. Give a clear account of Berkeley's Idealism, and trace its historical evolution in Berkeley's writings.

7. Give some characterization (with criticism) of Hegel's doctrine of God and Nature, in the light of Personality, and connect with it specially the teaching of Green on the same subject. Indicate the leading difficulties in the way of Hegelianism.

MORAL PHILOSOPHY.

FIRST PAPER.

Saturday, 9th April 1892.—1 to 4 o'clock.

Write an Essay, Constructive and Critical (with such historical reference as seems necessary), on

P E S S I M I S M.

SECOND PAPER.

Monday, 11th April 1892.—9 to 12 o'clock.

1. Define Desire. Point out its exact relation to Will, and show wherein consists its moral character. How are Will and Motive related? Is the Free Will problem insoluble? State Hamilton's contribution towards a solution of it, and show whether it is really consistent with his psychological doctrine of Consciousness of the Ego?

2. What is meant by Personality; and what is the importance of the idea of personality for Ethics? Indicate the relation between moral progress and moral habit. What metaphysical presuppositions are contained in the idea of moral progress?

3. What is the true function of Conscience in the guidance of Conduct? Referring to Conscience, Butler says: "Had it strength, as it had right: had it power, as it had manifest authority, it would absolutely govern the world." How do you explain the practical impotence here acknowledged?

4. Discuss the question as to the practical value of a *theory* of the moral ideal.

5. "Because right is right, To follow right were wisdom in the scorn of consequence." Explain this as uttered (1) by the intuitionist, (2) by the hedonist. Give a full exposition of the Hedonistic paradox, with a clear indication of its true nature and of the exact scope of its application.

6. Critically examine the following: "If there is a 'because' to my acts, responsibility seems to go; and yet we have an irresistible impulse to find a 'because' everywhere."

7. If there is such a thing as Speculative philosophy, does it necessarily eventuate in Pantheism?

8. To what extent is it true that the existence of God is a datum of Morality? Argue the question (1) in connexion with Green's views, (2) in connexion with the views of any other philosopher that you choose.

THIRD PAPER.

Monday, 11th April 1892.—1 to 4 o'clock.

1. What are the views of Socrates and Aristotle respectively regarding a virtuous life? What is the standard of morality accepted and urged by Socrates in the *Protagoras* of Plato? In what improved form does this standard commend itself to Professor Sidgwick in *The Methods of Ethics*?

2. State clearly the problem that Spinoza sets himself to solve in the *Ethics*. Examine his solution of it—(1) with reference to the method employed; (2) with reference to the result achieved. Criticize the proposition—"Quicquid est, in Deo est, et nihil sine Deo esse neque concipi potest."

3. Critically examine Kant's views of Apathy and of Enthusiasm in Ethics, considering how these views bear on the formation of virtuous habits.

4. Explain clearly Kant's Paradox of Method in Practical Philosophy, and state the grounds on which he attaches importance to it.

5. How does Kant, in his doctrine of *Ethical Theism*, try to avoid the charge of anthropomorphism, and with what success?

6. Point out the leading agreements and differences between Schelling's Philosophy and Hegel's. Give some account (with criticisms) of Hegel's doctrine of the Absolute on its Ethical side. To what extent is Hegel's Philosophy an advance on Kant's?

7. Give a lucid exposition of Green's doctrine of the Eternal Self-Consciousness. Examine the doctrine.

8. In his Ethical doctrine laid down in the *Methods of Ethics*, Professor Sidgwick claims to have "transcended the commonly-received antithesis between Intuitionists and Utilitarians." State clearly what is distinctive in his Ethical teaching, and show whether it really justifies the claim that he makes.

C.—DEPARTMENT OF MATHEMATICS.

MATHEMATICS.

Friday, 8th April 1892.—1 to 4 o'clock.

1. Find the trilinear equation to a cubic curve which has the sides of the triangle of reference for asymptotes and which passes through the three excentres of the same triangle.

Trace the following curve $x(x^2 - ay)^2 - y^5 + ay^4 = 0$.

2. Find the condition that the cubic $x^3 - p_1x^2 + p_2x - p_3 = 0$ have all its roots real.

Express the symmetric function

$$\left| \begin{array}{l} (y-z)^2 (z+x)^2 (x+y)^2 \\ (y+z)^2 (z-x)^2 (x+y)^2 \\ (y+z)^2 (z+x)^2 (x-y)^2 \end{array} \right|$$

in terms of the elementary symmetric functions of xyz .

3. Establish the convergency of the Binomial Series for all the cases in which it is convergent; and distinguish between the cases where there is absolute convergence and where there is only semi-convergence.

Discuss the convergency of Σe^{an-bn^2} , where a and b are positive and $c > 1$.

4. Establish rigorously that $\sin \theta = \theta - \theta^3/3! + \theta^5/5! - \dots$; and find an upper limit for the residue of the series.

Sum the series $1 + \theta^4/4! + \theta^8/8! + \theta^{16}/16! + \dots$ ad ∞ .

5. Interpret the following equations regarding (xyz) , 1st as point, 2nd as line co-ordinates.

$$1^\circ. ax^2 + by^2 + cz^2 = 0, \quad 2^\circ. fyz + gzx + hxy = 0,$$

3°. $f(x, y, z) + (\xi f_x + \eta f_y + \zeta f_z)(lx + my + nz) = 0$. In the last equation f is a function of the second degree, and $f(\xi, \eta, \zeta) = 0$.

A variable circle touches a given circle at a given point P , show that the locus of the pole of a given straight line L with respect to the variable circle is a hyperbola, which becomes a parabola when L is perpendicular to the common tangent to all the circles.

6. State the absolute invariants for the transformation of $(abcfgh)(xyz)^2$ from one set of oblique Cartesian axes to another; and show how they are used in reducing the equation to a parabola to its simplest form.

A parabola passes through two given points and has its axis parallel to a fixed straight line: find the locus of its vertex; and indicate the case in which this locus degenerates into a straight line.

7. Show how to find the centre of the section of a given quadric surface by a given plane.

Find the equation to the locus of the centres of the sections of the quadric $\Sigma x^2/a^2 = 1$ by the polar planes of all the points in a given plane; and give a geometrical interpretation of your result.

8. If $(a^2 - \lambda_1, b^2 - \lambda_1, c^2 - \lambda_1)$, $(a^2 - \lambda_2, b^2 - \lambda_2, c^2 - \lambda_2)$ be the two quadrics through P confocal with (a^2, b^2, c^2) , which also passes through P , then the axes of the central section parallel to the tangent plane at P are parallel to the normals to the two confocals, and the squares of the semi-axes are λ_1, λ_2 .

A series of conyclic hyperboloids of one sheet meet a given straight line in a range of points; find the locus of those generating lines of the quadrics that meet in the points of the range.

9. Show how to find the principal sections and the principal radii of curvature at any point of a surface.

Find the equation to the osculating plane at any point of the curve of intersection of the two quadrics $\Sigma ax^2 = 1$ $\Sigma a^1 x^2 = 1$.

10. Discuss the reduction of $\int dx/\sqrt{\{(Q+Px^2)(Q'+P'x^2)\}}$ to Legendre's Standard elliptic forms.

Show that $\int dx/(1+\sqrt{\tan x})$ can be evaluated by means of elementary transcendents, but that $\int dx/(1+\sqrt{\sin x})$ depends on elliptic transcendents. Sketch the reduction of the latter integral.

11. Briefly explain Cayley's Theory of Envelope Singular Solutions; and point out the limitations it involves.

Solve the following equations, and discuss the singular solution of the first :—

$$1^\circ. \left(1 + \frac{dy}{dx}\right)^2 - 2(x+y) \left(1 + \frac{dy}{dx}\right) \left(y + x \frac{dy}{dx}\right) + 8 \left(y + x \frac{dy}{dx}\right)^2 = 0;$$

$$2^\circ. (x \sin x + \cos x) \frac{d^2 y}{dx^2} - x \cos x \frac{dy}{dx} + y \cos x = 0;$$

(of which $y=x$ is a solution);

$$3^\circ. \frac{d^2 y}{dx^2} - y = x \sin x + (1+x^2)e^x.$$

12. Give a geometrical representation of the connection between the linear partial differential equation $Pp + Qq = R$ and its auxiliary system $dx/P = dy/Q = dz/R$; and deduce Lagrange's Solution. What solutions does the Lagrangian Solution not necessarily include?

Integrate the following :—

$$1^\circ. \cos(x+y)p + \sin(x+y)q = z;$$

$$2^\circ. p(1+q) = qz.$$

13. If $f(x)$ be a function of the complex variable x , and $x=a$ be not a critical point, then the expansion

$$f(x) = f(a) + \sum_{n=1}^{\infty} (x-a)^n f^{(n)}(a)/n!$$

will be valid within a circle whose centre is a which does not include any critical point of $f(x)$.

Show by taking the line integral $\int dz e^{-z^2}$ round a certain contour in

Argand's diagram that $\int_{-\infty}^{\infty} dx e^{-x^2} \cos 2bx = \sqrt{\pi} e^{-b^2}$.

Evaluate $\int_0^{\pi} dx \log \sin 2x$.

Friday, 8th April 1892.—9 to 12 o'clock.

1. The feet of the perpendiculars drawn from the intersection of the diagonals upon the sides of a cyclic quadrilateral P are joined so as to form a second quadrilateral Q . Show that Q is a quadrilateral of minimum perimeter inscribed in P , and that the perimeter is a fourth proportional to the radius of the circumscribing circle and the diagonals of P .

2. A circle of radius r cuts orthogonally three circles, which also cut each other orthogonally, and whose radii are r_1, r_2, r_3 ; prove that $r = r_1 r_2 r_3 / \sqrt{(-\Sigma r_1^2 r_2^2)}$.

3. Find the factors of the symmetrical expression in the variables x, y, z

$$\Sigma(1+yz)^3 x(y-z),$$

and hence, or otherwise, prove that if α, β, γ be any three angles $\Sigma \sin(\beta + \gamma - \alpha) \{ \sin \gamma - \sin \beta \} \equiv \Sigma \sin(\alpha + \beta) \Sigma \sin(\alpha - \beta)$.

4. If $\phi(n)$ denote the number of numbers less than n and prime to it, and if m is prime to n , show that $\phi(mn) = \phi(m)\phi(n)$, and hence find the value of $\phi(n)$.

If m be not prime to n , show that $\phi(mn) = \phi(m)\phi(n)c/\phi(c) = c\phi(l)$, where c is the greatest common measure, and l the least common multiple of m and n .

5. In any spherical triangle prove the formulae

$$(1) \sin a / \sin A = \sin b / \sin B = \sin c / \sin C;$$

$$(2) \cos a \sin C = \cos A \sin B + \sin A \cos B \cos c.$$

6. Prove that four normals can be drawn from a given point to an ellipse. Of the four points where the normals when real meet the ellipse, show that two lie in one quadrant of the elliptic arc, and the other two in the adjacent quadrants.

7. Find the equation, in areal or trilinear co-ordinates, of the conic inscribed in the triangle of reference.

If x', y', z' be the areal co-ordinates of a focus, and r_1, r_2, r_3 its distances from the vertices of the triangle, show that the equation of the inscribed conic is

$$r_1 \sqrt{xx'} + r_2 \sqrt{yy'} + r_3 \sqrt{zz'} = 0.$$

8. If $a, a'; b, b'; c, c'$ be the opposite edges of a tetrahedron, and p, q, r the distances between the middle points of $a, a'; b, b'; c, c'$, then

$$a^2 + a'^2 + 2p^2 = b^2 + b'^2 + 2q^2 = c^2 + c'^2 + 2r^2.$$

Show also that if θ be the acute angle between the directions of a, a' , $\cos \theta = \frac{(b^2 + b'^2) - (c^2 + c'^2)}{2aa'}$.

9. A rigid system receives an infinitesimal rotation θ about an axis,

passing through the origin, whose direction cosines are l, m, n . Find expressions for the displacements of a point x, y, z parallel to fixed axis of co-ordinates.

Hence find the condition that the quadric surface $(abcfgh)(xyz)^2=0$ should be a surface of revolution.

10. Show how to find the asymptotes of a curve of the n^{th} degree whose equation is given in Cartesian co-ordinates.

Prove that when a curve is defined as the envelope of a line $lx+my=1$, moving subject to the condition $\phi(l, m)=0$, the line is an asymptote when in addition $l \frac{d\phi}{dl} + m \frac{d\phi}{dm} = 0$. Interpret the result geometrically by means of the theory of reciprocal curves.

11 Evaluate the following

$$(1) \int dx \frac{(1+x)^4}{(1+x^2)(1+x^4)} \quad (2) \int dx \sin^{-1} \sqrt{\frac{x}{x+1}}$$

$$(3) \int dx \sqrt{\sec x - 1}.$$

Show that the area included between the curve $y^2(2a-x)=x^3$, and its asymptote is $3\pi a^2$.

12. Define the Gamma function, and show that $\Gamma(\frac{1}{2})=\sqrt{\pi}$.

Show that the integral $\int_0^\infty dx \frac{\cos x}{\sqrt{x}} = \sqrt{\frac{\pi}{2}}$.

NATURAL PHILOSOPHY.

Saturday, 9th April 1892.—9 to 12 o'clock.

1. Find how long it will take a small shot to fall through '01 of a foot to the surface of a lead globe 2 feet in diameter, under the attraction of the globe. [Radius of the earth 21×10^6 ; earth's mean density 5.5; density of lead 11.]

2. Find the accelerations of a point moving in a plane along and perpendicular to the radius vector of its path.

If the velocity of the point is the resultant of two velocities v, v' along two radii vectors r, r' , measured from two fixed points distance a apart; find the corresponding accelerations in terms of v, v', r, r' , and a .

3. Two equal planets, of mass m , approach each other in parallel lines, distance c apart, from an infinite distance, with equal initial velocities V . Determine their motion and show that they will ultimately recede from each other in parallel lines inclined at an angle $2 \tan^{-1} \frac{V^2 c}{m \gamma}$ to their direction of approach, γ being the constant of gravitation.

4. Explain what is meant by the terminal velocity of a body in a

resisting medium. A body is projected vertically upwards with a velocity V_0 ; prove that its height of ascent is given by the equation

$$h = \frac{V^2}{2g} \log \frac{V^2 + V_0^2}{V^2},$$

where V is the terminal velocity. Deduce from this the height of ascent when the resistance of the air is neglected.

5. Two equal uniform ladders, connected at their upper ends by a smooth hinge, rest on a rough horizontal plane. If a man ascends one of the ladders, show that equilibrium will be broken by the slipping of the other, and that the extreme position is given by $\tan \theta / \tan \alpha = 1 + W/(w + eW)$.

Where θ is the semi-angle between the ladders, α the angle of friction, w the weight of either ladder, W the weight of the man, and e the fraction of the ladder he has ascended.

6. Find the law of variation of the mass per unit length at each point of a chain acted on by gravity, that it may hang in the form of a semicircle whose diameter is horizontal.

7. Find the component of the attraction of a uniform lamina, in a direction normal to the lamina, upon an external point. Hence, or otherwise, find the attraction of a uniform circular disc on a point in its axis.

8. Define the potential of an attracting system, and prove that in free space it satisfies $\frac{\delta^2 V}{\delta x^2} + \frac{\delta^2 V}{\delta y^2} + \frac{\delta^2 V}{\delta z^2} = 0$.

Show that a particle in free space cannot be in stable equilibrium.

Show also that a particle resting on the smooth surface of a gravitating mass has equilibrium positions at points where the surface touches an equipotential surface, and explain geometrically when such equilibrium is stable.

9. A heavy particle is projected along a rough horizontal plane, which moves uniformly parallel to itself, without rotation. Determine the motion of the particle.

10. Find the moment of inertia of a uniform circular cylinder about its axis, and determine the length of the cylinder when its three principal moments of inertia at its centre of inertia are equal.

If the density of the cylinder at any point is proportional to the distance from the axis, find its moment of inertia about its axis.

11. Compare the times of descent of a uniform circular cylinder down an inclined plane, rolling, and sliding frictionlessly.

12. A uniform rod AB lies on a smooth horizontal plane. If a blow, P , be struck at the extremity A , perpendicular to the direction of the rod, find the kinetic energy (1) if the rod is free, (2) if there is a smooth pivot at B . Account for the difference, and state the general theorem exemplified.

Saturday, April 9th.—1 to 4 o'clock.

1. Show that in a central orbit, when the force is inversely as the cube of the distance, the square of the radius vector is a quadratic function of the time :—and employ this to classify the various forms of the orbit.

2. Define the *Action* in the path of a particle under any system of forces ; and find the general equation of equiactional surfaces for a particle projected with given *speed* from a given point.

As an example, take the law of force in the preceding question, and obtain the same results as before.

3. If ξ, η, ζ , continuous functions of the co-ordinates, represent the components of displacement of a point of a medium, find the complete specification of the strain in the immediate neighbourhood of that point. In particular, let

$$\xi = x + yz/a, \eta = y + zx/a, \zeta = z + xy/a.$$

4. Show that any infinitesimal motion of a rigid system, of which one point is fixed, is equivalent to rotation about an axis through that point ; and that the acceleration of angular velocity about any such line in the system, is equal to that about the line, fixed in space, with which it for the moment coincides.

5. Form the equations of motion of a rigid body under the action of no forces, and show that their complete solution may be expressed in terms of a single elliptic integral.

6. Find the condition of stability of a rocking-stone when both surfaces are spherical, and show how to calculate the time of vibration,

7. A uniform chain is suspended, from points at the same level, by equal strings whose weights may be neglected. Show how to find the dimensions of the catenary.

8. Form the general equations of equilibrium of a fluid under the action of any conservative system of forces ; and show that surfaces of equal pressure are also surfaces of equal density, and of equal potential.

How can equilibrium be obtained if the system be not conservative ? Take, for instance, an incompressible liquid, with forces

$$X = -y, Y = x, Z = -g.$$

9. Form and integrate the equation for the propagation of plane sound-waves, under the condition of adiabatic change of volume : and deduce from the integral the condition of reflection at a plane surface.

10. Given that a substance, in which (within certain limits of temperature)

$$p = f(v) + tF(v)$$

has its specific heat at constant volume independent of volume and temperature, find its specific heat at constant pressure :—and express its change of total energy between two states, corresponding to assigned values of volume and of temperature.

11. Form the equation for linear conduction of heat, and show that it has a particular integral of the form

$$\frac{1}{\sqrt{t}} e^{-\frac{x^2}{4\kappa t}},$$

where κ is the ratio of the conducting power to the water equivalent of unit volume, both of which are taken as constant. What is the interpretation of this integral, and how can it be made to furnish *any* other solution of the equation?

12. From the equation, for steady flow of electricity in a uniform conducting plate. Apply them to find the current lines in a circular plate, when the centre is connected with one pole of a battery, and a point in the circumference with another.

Bursaries, Prizes, Scholarships, and Fellowships in Arts.

I.—BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	16—	George Heriot.	At present £480 0 0	16	3	£30 0 0	Governors of George Heriot's Trust.
		Do. High School University Bursaries.	270 0 0	9	3	30 0 0	Do.
II.	16—	Do. For Young Men leaving Heriot's Hospital School.	Regulated by No. of Candidates.	5	4	30 0 0	Do.
III.	1619	Archibald Johnston, Merchant in Edin.	11 2 2	1	4	11 2 2	Earl of Haddington.
IV.	1622	John Trotter of Mortonhall.	4 10 1	1	4	4 10 1	Trotter of Mortonhall.
V.	{ 1626 1629 1640	Hugh Wight and David M'Call.	4 14 5	1	4	4 14 5	{ Town Council and Louis of Plean, two choices alternately.
VI.	1639	Dr Robt. Johnstone of London.	25 0 0	2	4	12 10 0	Johnstone of Annandale.
VII.	1639	Do. do.	25 0 0	2	4	12 10 0	Town Council.
VIII.	{ 1642 1653	{ Mausie Weir, relict of R. Dobie, Mer., & Dean of Guild of Edin., and D. Jenkins, Mer., Edin.	5 11 1	1	4	5 11 1	Town Council.
IX.	1644	Jas. Dalgliesh, Merchant, Edin.	11 2 2	1	4	11 2 2	Do.
X.	1673	Jn. M'Morran, Merchant.	2 15 6	1	4	2 15 6	Do.
XI.	1678	John Penman, Bailie and Merchant, Edinburgh.	14 15 0	1	4	14 15 0	Society for the Benefit of the Sons of the Clergy.
XII.	1678	Hector Ford of Branxton.	33 6 6	3	4	11 2 2	Town Council.
XIII.	1687	Sir Andrew Ramsay of Abbotshall.	11 2 2	1	4	11 2 2	Do. and Ministers of Edinburgh.
XIV.	1696	Hepburn and Lightbody.	5 16 8	1	4	5 16 8	Town Council and Campbell of Aberuchill, alternately.
XV.	1698	Ad. Chrystie, Under Clerk of Session.	18 0 0	1	4	18 0 0	Faculty of Advocates
XVI.	1702	Thos. Bryson, Bailie and Merchant in Dunbar.	0 0 0	2	4	5 0 0	Ministers of the Presbytery of Dunbar.
XVII.	1703	James Pringle of Torwoodlee.	6 7 9	1	4	6 7 9	Pringle of Torwoodlee.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons
XVIII.	1714	Rev. Robert Brown, of Protestant Consistory at Zamose.	£25 0 0	2	4	{ 15 0 0 10 0 0	Town Council.
XIX.	1723	Alexander Mitchell, W.S.	8 6 8	1	4	8 6 8	Livingston Learmonth of Parkhall.
XX.	1725	William Wardrope, Litster, Edinburgh.	5 11 1	1	4	5 11 1	J C. Wardrop, W.S., 82 Princes St., Edin.
XXI.	1726	David Christie, Wigmaker, Edinburgh.	8 6 8 About	1	4	£8 6 8 About	Town Council.
XXII.	1734	Laurence Dundas, Professor of Humanity in the University of Edin.	44 0 0	2	4	22 0 0	Jas. Dundas of Dundas, Robt. Dundas of Arniston, and Dundas of Carronhall, by turns.
XXIII.	1764	Rev. J. Penman, Min. of Bothkenner.	5 8 0	1	4	5 8 0	Gilmour of Craigmillar.
XXIV.	1768	Thos. Fraser, Clerk in the office of City Clerk, Edinburgh.	36 0 0	2	7	18 0 0	The Provost, Dean of Guild, and Treasurer of Edin.
XXV.	1778	Jas. Shortt, Optician, Edinburgh.	9 0 0	1	4	9 0 0	Earl of Morton.
XXVI.	1784	William Hume, Eastbarns, Dunbar.	16 0 0	2	4	8 0 0	Ministers of the Presbytery of Dunbar.
XXVII.	1784	Rev. Jas. Millar and Spouse.	24 0 0	1	4	24 0 0	Kirk-Session of Kippen.
XXVIII.	1809	Dr Donald Grant, London.	180 0 0	2	4	90 0 0	Earl of Seafield, and James Mackenzie, W.S., as Dr Grant's Trus.; whom failing, Sen. Acad.
XXIX.	1810	Rev. James Stewart.	30 0 0 About	3	3	10 0 0 About	Senatus Academicus.
XXX.	1821	Sir J. M'Pherson.	85 17 4	2	2	42 18 8 About	Senatus Academicus.
XXXI.	1837	James Menzies	200 0 0	4	4	45 0 0	Sir R. Menzies, Bart., & Ministers of Dull. Weem, & Forthingall
XXXII.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk.	10 0 0	1	3	10 0 0	Principal, and Profs. of Latin, Greek, Mathematics, Logic & Metaphysics, and Moral Philosophy.
XXXIII.	1846	John Jamieson, Esq., Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal, & two Profs. of the University.
XXXIV.	1846	G. P. Bidder, C.E.	43 12 0	1	4	43 12 0	Senatus Academicus.
XXXV.	1852	Wm. Lennie, Esq.	48 0 0	4	4	12 0 0	Town Council.
XXXVI.	1853	John Bruce, Esq., Trinity Crescent, Edinburgh.	160 0 0	{ 1 4	{ 4 4	{ 40 0 0 30 0 0	{ Do.
XXXVII.	1858	M'Diarmid Trustees.	10 0 0	1	3	10 0 0	Senatus Academicus.
XXXVIII.	1850	Wm. Patrick, Esq., of Roughwood.	About 120 0 0	1 2	2 2	About £80 " £40	Principal & two Profs. in Arts.
XXXIX.	1858	Edin. Ayrshire Club.	50 0 0	2	2	£25 0 0	Edin. Ayrshire Club.
XL.	1863	Peeblesshire Society.	45 0 0	3	4	{ 10 0 0 20 0 0	Peeblesshire Society.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
XLI.	1864	Ed. Galloway Asso.					Ed. Galloway Asso.
XLII.	1864	Ed. Caithness Asso.	£10 0 0	1	4	£10 0 0	Ed. Caithness Asso.
			Interest of			About	
XLIII.	1864	A.H. Rhind of Sibster.	500 0 0	1	4	20 0 0	Edin. Caithness Asso.
XLIV.	1865	Mrs Margt. Tyndall	165 0 0	3	3	35 0 0	{ Senatus.
		Bruce, of Falkland.		3	3	20 0 0	
XLV.	1865	Horsliehill Scott.	76 17 6	2	2	38 8 9	Do.
XLVI.	1867	Miss Hannah Harrison, of Lasswade.	34 13 2	1	2	34 13 8	Do.
XLVII.	1867	Rev. John Spence.	About 190 0 0	4	2	{ 1st Year 30 0 0 2nd Year 40 0 0 }	{ Governors of the Spence Bursary Trust.
						50 0 0	
XLVIII.	1869	Edin. Border Counties Association.	50 0 0	1	1	30 0 0	Edinburgh Border Counties Assoc.
	1872			1	4	20 0 0	
XLIX.	1869	Argyllshire, Bute, and Western Isles Assd.	12 0 0	1	4	12 0 0	Argyllshire Association.
L.	1870	Stewart of Ardvorlich.	16 0 0	1	4	16 0 0	Proprietor of the Estate of Ardvorlich.
LI.	1870	David Cowan.	About 35 0 0	1	2	30 0 0	Directors of Argy Academy.
				1	1	20 0 0	
LII.	1871	J. Robertson Sibbald.	150 0 0	5	3	30 0 0	Tr. of Dr J.R. Sibbald.
LIII.	1872	Angus Club.	25 0 0	1	4	25 0 0	Angus Club.
LIV.	1873	Earl of Zetland.	About 40 0 0	1	3	About 40 0 0	Trustees of Earl of Zetland.
LV.	1873	The Grierson Trus.	104 0 0	4	4	20 0 0	{ Senatus Acad.
				1	4	26 0 0	
LVI.	1874	Upper Ward of Lanarkshire.	20 0 0	2	4	20 0 0	Upper Ward Assoc.
LVII.	1874	Johnstone of Hart-hope.	18 15 0	1	4	18 15 0	Senatus Acad.
LVIII.	1874	James Lambert.	About 40 0 0	1	4	About 40 0 0	Senatus.
LIX.	1874	Fife, Clackmannan, and Kinross Assoc.	15 0 0	1	4	15 0 0	Fife, &c., Assoc.
LX.	1875	Robert Marshall.	37 10 0	1	4	37 10 0	Senatus Acad.
LXI.	1876	J. Fotheringham of Heathpool.	40 16 0	2	4	20 8 0	Senatus Acad.
LXII.	1877	Earl of Zetland.	About 40 0 0	1	3	40 0 0	Trustees.
LXIII.	1878	Edin. E. Lothian Asso.	20 0 0	1	3	20 0 0	Association.
LXIV.	1878	{ Edin. University } { Endowment Asso. }	120 0 0	6	3	20 0 0	Senatus Academicus.
LXV.	1878	Jas. Gillan, Forres.	63 0 0	3		21 0 0	Mr Gillan's Trustees.
LXVI.	1878	Dr Andrew Thomson	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.
			About			About	
LXVII.	1880	Rev. John Patterson	20 0 0	1	4	20 0 0	Senatus Academicus.
LXVIII.	1880	High. and Agri. Soc.	200 0 0	10	1	20 0 0	Highland Society.
LXIX.	1881	Thomas Carlyle.	About £160	8	4	20 0 0	Senatus Acad.
LXX.	1883	Subscribers to Mac-kinnon Testimonial	£56 5 0	3	3	18 15 0	Senatus Acad.
LXXI.	1882	James Whitelaw.	66 18 10	3	3	22 6 4	Senatus Acad.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
LXXII.	1883	William Renton, Edinburgh.	£19 9 6	1	1	£19 9 6	Profs. Chrystal, Tait, Crum Brown, and Nicholson.
LXXIII.	1883	Isabella Macdougall	About 120 4 3	4	3	About 30 0 0	Trustees.
LXXIV.	1886	Rob. P. Newton of Castlandhill.	83 16 8	4	2	20 19 2	Senatus Academicus.
LXXV.	1886	Pet. C. Mann of Nairn and Durham.	80 0 0	3	3	26 13 4	Senatus Academicus.
LXXVI.	1886	Richd. Allan, Feuar. Kelso.	About 90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
LXXVII.	1887	Mrs Kidd of Aigbarth, near Liverpool.	33 9 4	1	4	33 9 4	Senatus Academicus
LXXVIII.	1887	Charles Jardine of Thorlieshope.	About 152 8 4	4	4	About 38 2 2	Senatus Academicus.
LXXIX.	1888	Mrs Harriet E. Morrison.	About 24 0 0	1	4	About 24 0 0	Senatus Academicus.
LXXX.	1889	Daniel Maclaurin, London.	About 70 0 0	1	4	About 70 0 0	Town Council.
LXXXI.	1889	James Simson, Edinburgh.	150 0 0	6	4	25 0 0	Presbytery of Edinburgh.
LXXXII.	1890	George Cousin.	28 0 0	1	3 or 4	28 0 0	Senatus Academicus.
LXXXIII.	1890	Rev. Thomas Maule.	80 0 0	4	6	20 0 0	Principal, and Profs. of Humanity and Greek.
LXXXIV.	1891	Donald Fraser, M.D., London, and Association for the Better Endowment of the University.	50 0 0	1	1	50 0 0	Senatus Academicus.

CONDITIONS OF FOUNDATIONS AND NAMES OF BURSARS.

I. These *Heriot Bursaries* are for Students unconnected with the Hospital, entering upon a regular Curriculum in Arts or Science with a view to graduation. (For remodelled scheme, see CALENDAR, 1887-88, p. 498.) *Bursars*—1889, Robert Samson, Franklin Ross, A. K. Campbell. 1890, Andrew Tweedie, Allan G. Gilbert, Thomas Smith, James A. Craig, John Gifford, E. H. Franks, Jas. B. M'Owan. 1891, Robert C. M. Bell, Thomas Hart, Charles S. Pennell, Donald B. Waters, James Ferrier.

Do., High School University Bursaries. These are awarded by competitive examination among Scholars attending the High School, Edinburgh, and may be held at any University approved by the Governors. *Bursars*—1888, Neil Macmichael. 1889, Hugh Jackson. 1890, J. Keith Ross, James A. Gibson. 1891, Donald G. Ross, Thomas S. Muir.

II. *Do.* Young men who, upon leaving Heriot's Hospital, are, after examination, declared hopeful scholars, and fit to follow any of the liberal professions, are entitled to a Bursary of £30 a-year for four years, with a view to attendance on the regular course in Arts, with a view to the degree of M.A.

III. *A. Johnston Bursary*.—Each Bursar is entitled to hold this Bursary for four years, subject to the conditions that he shall pass such examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and pass the Departmental Examinations for M.A. appropriate to each year. No one is permitted to hold the Bursary along with any other Bursary in the University. The Bursar must attend the Classes in the Arts Curriculum.

IV. *Trotter Bursary*. This Bursary is held under the same conditions as No. III.

V. *Wight and McCall Bursary*. This Bursary is held under the same conditions as No. III.

VI. and VII. *R. Johnstone Bursaries*.—By Ordinance No. 82, the holder of each of the four Robert Johnstone Bursaries is entitled to hold his Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and regularly pass the Departmental Examinations required of Students proceeding to the degree of M.A. No person is allowed to hold any of these Bursaries along with any other Bursary in the University.

VIII. *Weir and Jenkins Bursary*.—For a Student in Arts, who must follow the Curriculum for the Degree of M.A.

IX. The *Dalglish Bursary* is entitled to hold the Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts in the University, and regularly pass the Departmental Examinations required of Students proceeding to the Degree of M.A. No person is allowed to hold the Bursary along with any other Bursary in the University.

X. *McMorran Bursary*.—This Bursary is for a “Student of Philosophy” in the Arts Curriculum.

XI. *Penman Bursar*.—The Bursar must attend the Classes in the Arts Curriculum.

XII. Each *Ford Bursar* is entitled to hold his Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and regularly pass the Departmental Examinations required of Students proceeding to the Degree of M.A. No person is permitted to hold any of the Bursaries along with any other Bursary in the University.

XIII. The *Sir A. Ramsay Bursar* holds his Bursary for four years, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and regularly pass the Departmental Examinations required of Students proceeding to the degree of M.A. No person is permitted to hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University.

XIV. The *Hepburn and Lightbody Bursary* was founded by Sir Colin Campbell, Lord Aberuchill, and Sir Patrick Aikenhead, as executors of Sir Patrick

Hepburn of Blackcastle. It is for a Student of Philosophy who follows the Curriculum in Arts.

XV. The *Chrystie Bursary* is usually held for four years. The Bursar is taken bound to attend "the usual classes," and must produce yearly to the Faculty certificates from the respective Professors of his due attendance, and the diligent prosecution of his studies. Candidates are referred for information to the Clerk to the Faculty of Advocates, Advocates' Library.

XVI. The *Bryson Bursars* are first to enter the Humanity class: afterwards they are to pass through the rest of the classes in Arts until their Laureation; at which time, if judged by the ministers of the Presbytery of Dunbar fit for the study of Theology, they may continue for two years in Theology.

XVII. The *Pringle Bursary* was founded by James Pringle of Torwoodlee for a Bursar in Philosophy and Divinity, who must attend the classes in the Curriculum in Arts for M.A.

XVIII. The *Brown Bursaries* are payable to Bursars in the regular course of study in Arts for M.A.

XIX. The *Mitchell Bursary* is payable to a student during a regular course of four years in the Faculty of Arts for M.A., and during two years (if the Patron think fit) at the Divinity Classes.

XX. The *Wardrope Bursary* is for the maintenance and support of a Bursar of Philosophy in the University.

XXI. This *Christie Bursary* may be held by a Student during a regular course of four years in the Faculty of Arts for M.A.

XXII. *Dundas Bursaries*.—The Patrons are directed to prefer the Mortifier's near relations; failing such, those of the surname of Dundas; and failing such, any other persons at their discretion. By Ordinance No. 78 of the Universities' Commissioners, each person presented to either of the Dundas Bursaries is entitled to hold the same for four years as a Student of Arts, subject to the condition that he shall pass such entrance examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and shall regularly pass the Departmental Examinations required for M.A. These Bursaries cannot be held with any other Bursary in the University.

XXIII. The *Penman Bursary* is payable to a "Student of Philosophy" for the period of four years in the Curriculum of Arts.

XXIV. The *Fraser Bursaries* are for maintaining two Students of the name of Fraser, till they finish their course and take the Degree in the Faculty of Arts, and for three years thereafter; they making their election whether to follow Divinity, Law, or Medicine. Two Classes at least must be attended each Winter Session. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

XXV. The primary object of the *Shortt Mortification* is the establishment of a Bursary for Mathematics. The Bursar must attend the Classes in the Curriculum in Arts.

XXVI. The conditions of the *Hume Mortification* correspond with those of Bryson's, No. XVI., and the presentations and payments are made as in that case.

XXVII. *Millar Bursary*.—To be held by a Student intended for the Ministry in the Church of Scotland, during his Curriculum in the Faculty of Arts.

XXVIII. The *Grant Mortification* is for Students of the University of Edinburgh, of the name of Grant. The holders may attend the Arts, Medical, Divinity, or Law Classes. Application for information may be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh. *Bursars*—1890, James Taylor Grant, Lewis Grant.

XXIX. *Stewart Bursaries*.—Candidates must be in the *second* year of attendance in the Curriculum of Arts. Bursars must attend Logic and the other Classes usually attended in that year, with a view to the Degree in Arts. *Bursars*—1890, R. M. Samson, Alex. F. Lay.

XXX. The *Macpherson Bursaries* are for the benefit of Students who are natives of the Highlands. They are bestowed on Students at the commencement of the *third* year of the regular course in Arts, with a view to the Degree of M.A., and are tenable for two years, during which the Bursars must attend Classes in the Curriculum of Arts. Candidates must have a knowledge of Gaelic. *Bursars*—1890, Neil Macmichael. 1891, Hugh Gunn.

XXXI. *Menzies*.—These Bursaries, four in number, were founded in 1837, by James Menzies, Esq., Glasgow. They are of the annual value of £45 each, but vary in amount at discretion of the patrons, and tenable for four years, in any one of the Universities of St Andrews, Glasgow, or Edinburgh. Preference first to the relations of the Founder, next, to the name of Menzies; failing whom, to persons born on the estate of Sir Robert Menzies, Bart., within the parishes of Dull, Veem, and Fortingall; failing whom, any Student who shall be found best qualified may be appointed.

XXXII. The *Blair Bursar* must attend the Classes in the required order, and pass the Departmental Examinations necessary for the Degree of M.A. *Bursar*—1889, William Brander.

XXXIII. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Robertson, Culter and Biggar. The Bursar may attend Classes in any of the Faculties. *Bursar*—1889, Andrew Rae.

XXXIV. Called the "*Jardine Bursary*," being founded by Mr Bidder, C.E., as a memorial of the munificence of Sir Henry Jardine to him, to which he owed the advantage of his education at the University of Edinburgh. Candidates must be natives of Scotland. The Bursar must attend the Classes, and pass the Departmental Examinations necessary for the Degree in Arts. *Bursar*—1888, Hugh R. Mackintosh.

XXXV. *Lennie Bursaries*.—Bursars must attend the Classes in the Arts Curriculum. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

XXXVI. *Bruce Bursaries*.—Prior to the commencement of each Winter Session, five Students are presented yearly, the most distinguished of the five receiving the

£40 Bursary. The Bursars must be in regular attendance on the Classes necessary for the Degree of Master of Arts. Candidates announce their names at the Council Chambers to the City Clerk.

XXXVII. The *M'Diarmid Bursary* is a memorial of the late John M'Diarmid, Esq., Editor of the *Dumfries and Galloway Courier*. Candidates must be natives of the county of Dumfries or the stewartry of Kirkcudbright. The Bursar must attend the Classes and Examinations necessary for the Degree of Master of Arts. Applications regarding the Bursary to be made to "H. Gordon, Esq., Dumfries." *Bursars*—1889, W. H. Carse.

XXXVIII. The *Patrick Bursaries* are for the assistance of those who have completed a course of education at any of the public schools or academies in the county of Ayr, where a course of Classical Study is pursued, and who are in a condition to apply for admission into the University. Their value fluctuates, being, for the first, two-thirds of the dividend on £3000 Glasgow and South-Western Railway Stock; and for the second, the remaining third of said dividend. The Bursars must attend the Classes and Examinations necessary for the Degree in Arts, in the order required by the Faculty. See p. 197 of CALENDAR for 1865-66. *Bursars*—1890, 1st, Alexander B. Macdonald; 2nd, George Hart.

XXXIX. *Ayrshire Club Bursaries*.—Awarded after competitive examination to natives of Ayrshire requiring aid, and tenable during the Curriculum in Arts, on condition of regular attendance at the Classes, with a view to the Degree. Information will be afforded by the Secretary of the Club, Mr A. H. Cooper, W.S., 8 S. Charlotte Street. *Bursar*—1889, Hugh Reid; 1891, Wm. S. Nicholson.

XL. *Peeblesshire Bursaries*.—Candidates must be natives of Peeblesshire, must have been educated within the county, and must pursue the Curriculum of Arts, at this University, with a view to the degree in Arts. A bursary of £20 is given by the Society; one of £10 by Mr Tod of St Mary's Mount, the latter tenable in any Scottish University. Apply to the Secretary of the Society, Mr James Stirling, 27 East Claremont Street.

XLI. *Galloway Bursary*.—Discontinued for the present.

XLII. and XLIII. *Cuthness and Rhind Bursaries*.—Bursars must attend Classes in Arts Curriculum. Apply to Secretary of the Association.

XLIV. *Bruce of Grangehill and Falkland's Bursaries*.—Three of these Bursaries, of the annual value of £35, are awarded after competitive examination to Students of the *second* year in their course of study for a Degree in Arts; and three others, of the annual value of £20, to Students entering the *first* year of the Arts Curriculum. *Bursars*—First year, 1889, D. G. Hamilton; 1890, William Harvey, J. W. Duffus, George R. T. Ross. Second year, 1890, George L. Moffat; 1891, W. W. M'Kechie.

XLV. *Horslichill-Scott Bursaries*.—Annual value £35 to £41, under deduction of £6, 6s. for Examiners' fees from first year's payments. Open to Students in the *third* year of their course for a Degree in Arts, and tenable for two years. The examination is in Classics, Mathematics, and Logic and Metaphysics. Deed of Foundation, at p. 208 of CALENDAR for 1866-67. *Bursars*—1890, Robert Lees, T. W. Wilson.

XLVI. The *Harrison Bursary* is of the annual value of £32, under deduction of £6, 6s. of Examiners' fees from first year's payments. Open to Students in the third year of their course in the Faculty of Arts, with a view to a degree, and is tenable for two years. It is to be awarded to the competitor who shall show the greatest proficiency in Classics, Mathematics, and Logic and Metaphysics. See Deed of Endowment, p. 231 of CALENDAR for 1867-68. *Bursar*—1891, T. G. Bailey.

XLVII. *Spence Bursaries*.—By the regulations of the Governors, two Bursaries, each of the annual value of £30 for the first year and £40 for second year of tenure, are open only to Students who have studied in the University of Edinburgh, at the commencement of their second session in a three years' curriculum, or of their third session in a curriculum of four years. Examination in Latin, Greek, Mathematics, and British History. Governors may award to any Bursar who has graduated or passed all the examinations for a Degree in Arts, a Bursary of £50 for one year, tenable in any of the other Faculties. See Scheme, p. 520 of CALENDAR 1889-90. Candidates apply to Messrs A. & H. Patullo, Writers, 11 Bank Street, Dundee, for particulars.

XLVIII. *Border Counties and Sir Walter Scott Bursaries*.—Candidates must be natives of the counties of Roxburgh, Berwick, or Selkirk, and must attend the classes necessary for a Degree in Arts. Application to be made to Mr T. Usher, Sheriff Court House, Edinburgh. *Sir W. Scott Bursar*—1889, John Henderson. *Border Counties Bursar*—1891, John K. Graham.

XLIX. *Argyllshire Bursary*.—To be held by natives of Argyllshire, Bute, or Western Islands. The holder must attend the classes necessary for a Degree in Arts. Application may be made to Donald Beith, Esq., W.S., 43 Castle Street, Edinburgh.

L. *Ardvorlich Bursary*.—Open to Students of Arts, natives of the parishes of Comrie, Balquhiddel, Callander, or Killin, failing whom, to natives of Perthshire, and failing such, to the best qualified candidate. The holder must attend Arts or Science classes. Application to be made to the Clerk of Senatus. For remodelled Foundation, see CALENDAR 1887-88, p. 501; for original deed, see p. 275 of CALENDAR for 1870-71. *Bursar*—1890, J. F. Cameron.

LI. *Cowan Bursary*.—Candidates must be about to enter the Curriculum in Arts. Annual value for first two years £30, and £20 for third year, to be held alternately at Edinburgh and Glasgow Universities. Information will be afforded by W. F. M'Cubbin, Esq., Ayr.

LII. *Sibbald Bursaries*.—The Bursaries are available to Students in the Faculties of Arts, Medicine, Law, or Divinity, and are open to Students entering the University who have not previously attended any University in the United Kingdom or elsewhere, and who do not hold any other Bursary or Scholarship; but no objection to a Candidate that he has, during the previous Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. See CALENDAR for 1888-89, pp. 171 and 177. Application to be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh. *Bursars*—1888, Philip H. Hanson, David S. Crichton; 1889, Gavin Grey; 1890, Hugh M'Calman, John A. Johnston; 1891, Chas. P. Edgar, William J. Keith.

LIII. *The Angus Club Bursary*.—Open to Forfarshire students entering the University for the first time. Application should be made to the Secretary of the Club, Mr T. S. M'Laren, W.S., 11 Hill Street.

LIV. *Orkney and Zetland Bursary*.—Open to first year's Students (male or female), natives, or children of parents who are natives of the County of Orkney and Zetland. It is tenable for three years. The Bursar must attend the Classes in the Curriculum in Arts, with a view to a Degree. Applications to be sent to Messrs Dundas & Wilson, C.S., 17 St Andrew Square, Edinburgh. The Deed of Foundation will be found in CALENDAR for 1873-74, p. 329.

LV. *Grierson Bursaries*.—Four Bursaries of £20 each, and one of £26, awarded annually in November, under the patronage of the Senatus. They are restricted in the first place to natives of either of the parishes of Crawford or Leadhills, who must pass an examination, satisfactory to the Senatus, in Elementary Latin, English, and Arithmetic. In the event of more than one preferential Candidate, the examination is competitive among such candidates. If no preferential Candidates, the Bursaries are thrown open for competition to all Students then intending to enrol in the University for the First Session of the Curriculum in Arts, the subjects of examination being those prescribed for Bursars of the First Year. *See* Trust Disposition of Founder at p. 335 of CALENDAR for 1873-74, and p. 368 of the CALENDAR for 1877-8. *Bursars*—1889, W. G. Napier; 1890, E. M. Beilby, James Paterson. 1891, Robert L. Ross, Peter M'Gregor, Arthur G. Edie.

LVI. *Lanarkshire (Upper Ward of) Bursaries*.—Bursars must attend the Classes in the Arts Curriculum. Mr R. Brown, Secretary, 28 St Andrew Square. *Bursar*—1888, J. D. P. M'Letchie.

LVII. *Johnstone of Harthope Bursary*. Natives of Moffat, Peebles, and Students of the name of Alexander or Johnstone preferred, if preferential candidates announced to Secretary of Senatus before 1st of October. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. *See* Deed of Foundation, at p. 350 of CALENDAR for 1875-76. *Bursar*—Archibald Alexander.

LVIII. *Lambert Bursary*.—This Bursary cannot be instituted until after the death of an annuitant. *See* Deed of Foundation, at p. 342 of CALENDAR for 1875-1876.

LIX. *Fife and Kinross Bursary*.—Open only to Students from Fife, Clackmannan, and Kinross. Applications may be made to the Hon. Secretary, Mr James Skinner, S.S.C., 14 Frederick Street, Edinburgh.

LX. *Marshall Bursary*.—Restricted in the first place to relatives of Founder, next to Students of the name of Marshall, and natives of West Lothian. *See* Deed of Foundation, at p. 347 of CALENDAR for 1876-77. *Bursar*—1888, James M. Thomson.

LXI. *Fotheringham and Forrest Bursaries*. Relatives or namesakes of the Founder, then such as are of the name of Forrest, to be preferred. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. *Bursars*—1889, James Wood; 1890, C. A. Macpherson.

LXII. *Earl of Zetland's Bursaries*.—These Bursaries are open to First Year

Students in the Faculty of Arts, who are natives of the Islands or County of Orkney and Zetland, or children of parents, one or both of whom shall have been born in or connected for a long period of years with the said Islands or County. For Deed of Foundation of these Bursaries, *see* p. 373 of CALENDAR for 1877-78. Application to be made to Messrs Dundas & Wilson, C.S., 17 St Andrew Square, Edinburgh. *Bursar*—1891, J. W. Flett.

LXIII. *Edinburgh East Lothian Association's Bursary*.—The Bursary may be competed for by any lad under the age of 18, who has been educated at any school in East Lothian, or who, having passed through all the standards or their equivalents at such schools, shall have afterwards attended for not more than three sessions any secondary school within or without the county. Application may be made to J. Purves, S.S.C., 65 Frederick Street.

LXIV. *Edinburgh University Endowment Association's Bursaries* are open to Students entering the Faculty of Arts for the first time, are tenable for three years, and the Examination is held at the annual Arts Bursary Competition. Bursars must proceed through the Curriculum in Arts, and pass the Examinations for the Degree of M.A. Lapsed Bursaries may be awarded for one year to Students of the first or any year, whose merits have been attested in the usual Bursary Examination of their year. Cannot be held with any other Bursary. *See* Minute of the Endowment Association, among Deeds of New Foundations, p. 375 of CALENDAR for 1878-9. *Bursars*—1889, Robert Godfrey, T. G. Bailey, H. F. L. Taylor; 1890, Thomas Pullar, Stuart Robertson, Drummond S. Ross; 1891, William E. Hutchison, James Masson, John Thomson.

LXV. *Gillan Bursaries*.—Founded in 1878 by James Gillan, draper, Forres. These Bursaries are for the support at the University, and at the New College, Edinburgh, of two young men connected with the parish of Forres, and one connected with Dyke, who have declared their intention to study for the ministry of the Free Church of Scotland. For particulars apply to Messrs R. & R. Urquhart, Solicitors, Forres.

LXVI. *Thomson Bursaries*.—Candidates of the name of Thomson or Traquair, or natives of town or county of Dumfries or city of Edinburgh, preferred. *See* Deed of Foundation, p. 367 of CALENDAR, 1877-8, and Scheme of Allocation, p. 346 of CALENDAR, 1879-80. Applications to be made to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street. *Bursars*—1886, James Watt. 1887, A. M. Hunter. 1888, George Liddell. 1889, A. Claud Montgomerie Bell. 1890, G. Scott Dalgleish. 1891, F. Guthrie Smith.

LXVII. *Patterson Bursary*, in Anglo-Saxon, Grammar, and Literature. To come into operation on the death of an annuitant. *See* Deed of Foundation at p. 379 of CALENDAR for 1880-81.

LXVIII. *Highland and Agricultural Society's Bursaries*.—The Society annually grants £200 for ten Bursaries of £20 each, tenable for one year, at the University of Edinburgh, for the purpose of enabling the holders to take the classes necessary to qualify for the Society's Certificate or Diploma, to be determined by examination held in Edinburgh by the Society's Examiners.

LXIX. *John Welsh Bursaries*, founded by Thomas Carlyle in 1881, in memory of his Father-in-law, to whom the estate of Craigenputtock in Dumfriesshire,

bequeathed by Mr Carlyle to the University of Edinburgh, formerly belonged. The Bursaries are paid from the rents of that estate, and are eight in number, of the value of about £20 each, tenable for four years. They are awarded, after competition, to Students entering the University, who have not studied in any other University. Four are to be given to the competitors most proficient in Mathematics, and four to those most proficient in Classics. They are not to be held with any other Bursary. See Deed of Foundation at p. 379 of CALENDAR for 1881-82. *Bursars*—(Classical)—1890, Walter R. Henderson, W. W. McKechnie; 1891, George A. Davidson, Robert White. (Mathematical)—1887, James Mitchell, Robert Pollok; 1890, J. Hossell Henderson, A. G. Burgess; 1891, Francis Dewar, Frederick A. Barnardo.

LXX. *Mackinnon Bursaries*.—Three Bursaries about £18, 15s., tenable for three years, to encourage the study of the Mechanical Sciences. Each Bursary is open for competition to Students entering their First Session in the Faculty of Arts. Candidates must be natives of the counties of Argyll, Bute and Arran, Inverness, Ross or Sutherland, and must be able to speak the Gaelic language. The Examination is held at the annual competition for Bursaries at the beginning of each Session, with an additional examination by the Professor of Celtic; at least 10 per cent. of the total marks attainable being assigned to Gaelic. Each Bursar is bound to attend at least two classes in the Faculty of Arts during his tenure, and among these six classes, at least one class of Mathematics, one of Natural Philosophy, and the class of Engineering. The Bursary cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, or with any office yielding an annual income of £50 or upwards, and is tenable only during good behaviour and proficiency. *Bursars*—1889, David Duncan; 1890, Farquhar C. Macrae, J. M. Macdonald; 1891, Norman C. MacDonald.

LXXI. *Whitelaw Bursaries*.—In memory of James Whitelaw, Watchmaker. Three Bursaries, about £23 each, tenable for three years, open to Students about to enter, or who follow the Curriculum in Arts. Cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, or with any office yielding £50 annually, or upwards. Examination in October annually. *Bursars*—1891, Jas. V. Simpson, John Macaskill, Donald Macdonald.

LXXII. *The Renton Bursary*, founded by the Trustees of the late William Renton, 20 Royal Terrace, Edinburgh, is for a Student pursuing his studies in the classes of Natural Philosophy, Mathematics, Chemistry, and Political Economy, or such of them as he may consider proper, and who may require assistance. The Bursary is tenable for one year, and cannot be held by any one under the age of sixteen or above twenty-one. It is filled up in November each year. The Examination is conducted each year by the Assistant to one of the Professors of Natural Philosophy, Chemistry, and Mathematics in turn, and in the above-named order. *Bursar*—1891, William Fulton.

LXXIII. The *Macdougall Bursaries* are open to Students of Edinburgh, Glasgow, and St Andrews Universities. Students attending the Gaelic Class to be preferred. The Bursaries cannot be held with any Bursary or appointment yielding £50 per annum. See Deed of Foundation at p. 435 of CALENDAR 1885-86. Application may be made to Mr W. C. Young, solicitor, Perth.

LXXIV. *Newton Bursaries*.—Two are awarded annually, one to the most dis-

tinguished Student in the Junior Class of Natural Philosophy, and one in the Senior (Second) Class of Mathematics. The Bursaries are tenable for two years, and the Bursars must continue their studies in the higher branches of the subjects of their Bursaries, and at the end of the second year of tenure, either take Honours in Mathematics and Natural Philosophy, pass the 2nd B.Sc. Examination, or give other evidence of advanced study in Mathematics or Natural Philosophy. These Bursaries are not to be held with other Scholarships or Bursaries. See Deed of Foundation, p. 460 of CALENDAR, 1886-87. *Bursars (Math.)*—1892, G. T. Davidson. *Lapsed Bursary*—John Sutherland (*Nat. Phil.*)—1892, T. W. Pickles.

LXXV. *Mann Bursaries*.—(1.) Candidates must be children of residents in the town of Nairn, *i.e.*, one or both parents must have resided within the municipal boundaries for at least twelve months at any period prior to the competition. (2.) Applications must be lodged with the Clerk of Senatus at least three weeks before the Annual Bursary Examination of the University, along with evidence of compliance with Rule I. (3.) One will be awarded annually to the candidate, matriculating for the first time in this University, who obtains the highest marks at the Entrance Bursary Examination in English, Latin, Greek, and Mathematics, provided the Examiners be satisfied with the standard he has attained. (4.) Each will be tenable for three years, value about £25 per annum. (5.) Failing candidates of the first year, the vacant Bursary will be awarded as a second year Bursary to the candidate who obtains the highest marks in the Bursary Examination for the second year; and, failing candidates of the first and second years, it will similarly be awarded as a third year Bursary. When awarded under this Rule it is tenable for one year only. (6.) Failing candidates qualified under Rule III. or Rule V., the Senatus may continue one of the Bursaries to its holder for a fourth year, provided he propose to continue his studies for a fourth year in some special subject. (7.) Each Bursar must be *bona fide* engaged in studying for a Degree in Arts or in Science, and must produce evidence at the end of each Winter Session that he has attended at least two classes in the Faculty of Arts, or in a Department of Science, and has made reasonable progress in his studies. (8.) Any breach of these regulations, or conduct unworthy of a scholar and a gentleman, will be punished by forfeiture of the Bursary. See Deed of Foundation, p. 497 of CALENDAR 1887-88, and Regulations at p. 544 of CALENDAR for 1890-91. *Bursars*—1889, Thomas Fraser, James Tolmie; 1890, John Rose, A. M. Mackay; 1891, W. J. Collier, for one year.

LXXVI. *Allan Bursaries*.—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Medicine, or Law, in the University of Edinburgh, or to Students attending the classes in said University necessary for Degrees in Science; and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

LXXVII. *James Fairbairn Bursary*, founded by Mrs Kidd of Palmyra, Aigbarth, near Liverpool, in memory of James Fairbairn, late Governor of

Heriot's Hospital, is open to competition to first year Students, and is tenable for four years. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursary cannot be held along with any other Bursary or Scholarship. See Deed of Foundation, p. 501 of CALENDAR, 1887-88. 1889, R. P. Davidson.

LXXVIII. *Jardine of Thorthieshope Bursaries*.—Natives of the rural districts of Roxburghshire and Dumfriesshire (villages and towns of the population of 2000 and upwards being excluded), who have attended the Public or Board Schools in said counties, to be preferred. In the event of there being no first year Candidates, the Bursaries will be thrown open to Candidates of the second, third, or fourth year in succession, but will be tenable for one year only. The Bursars are required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursaries cannot be held along with any other Bursary or Scholarship. See Deed of Foundation, p. 497 of CALENDAR, 1887-88. *Bursars*—1889, George White; 1890, Richard C. Davidson; 1891, William M'Clymont.

LXXIX. *MacKenzie (Stornoway) Bursary*.—Candidates of the name of MacKenzie have a preference. The Examination is in Latin, Greek, Mathematics, and English, and the Bursary will be awarded to the Candidate who stands highest, provided he has reached the standard of the Three Years' Curriculum Examination in at least two subjects. Failing a preferential Candidate, the Bursary will be thrown open to competition as a first year Bursary in Arts. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the course. For Regulations, &c., see p. 521 of CALENDAR for 1889-90. This Bursary will not be instituted until the death of a liferenter.

LXXX. This Bursary, tenable for four years, is by the will of the founder to be called the "Maclaurin Bursary," and is restricted to Students of the Founder's name of Maclaurin (or in Gaelic orthography "Maclalhrin"). It may be held in any of the Faculties. See Deed of Foundation, p. 544 of CALENDAR for 1890-91.

LXXXI. Six Bursaries, each of the annual value of £25, and tenable for two years in the Faculty of Arts, and two in the Faculty of Divinity. They are open to Students entering on the second or third year of the Course in Arts, who are studying for the Ministry of the Church of Scotland. For conditions of tenure and subjects of examination, apply to the Rev. Dr Langwill, Currie, or to Rev. John Patrick, Greenside, Edinburgh.

LXXXII. *Bailie Cousin's Bursary* is open for competition to Students entering the Faculty of Arts on a regular course (of three or four years) for the Degree of M.A. The holder must regularly pass the departmental examinations appropriate to each year. The Bursary cannot be held along with any Fellowship, Scholarship, or Bursary of any Scottish University, or with any situation or appointment yielding an annual income of £30 or upwards. For Deed of Foundation see CALENDAR 1891-92, page 536. *Bursar*—1891, A. Croom Paterson.

LXXXIII. *Maule Bursaries*.—These Bursaries are for the education of poor and deserving Students. They may be held by Students prosecuting their studies in any of the Faculties. The Examination is in Latin, Greek, Mathematics,

and English for preferential Candidates. See Deed of Foundation, p. 543 of CALENDAR for 1891-92.

LXXXIV. *The Donald Fraser Bursary* is awarded for high merit in the University Class of Natural Philosophy, combined with proficiency in Laboratory Work. The Bursar is required to give assistance in the University Physical Laboratory, and to engage in research there. The Bursary cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University. See Deed of Foundation, p. 545 of CALENDAR for 1891-92. 1892—*Bursar*, John Middleton.

II.—PRIZES.¹

I.—THE LORD RECTOR'S PRIZE.

The Lord Rectors since 1879 have, during their respective tenures of office, offered a Prize of Twenty-five Guineas annually, for the best Essay on a Historical Subject. The following are the names of the prizemen :—

1887. In abeyance.	1889. Stewart Alan Robertson.
1888. Geo. Wilton Wilton, B.L.	1890. James Wallace.
<i>Prox. access.</i> , Hotchkin Haynes Murray	1891. <i>John Davidson, M.A.</i>

II.—EDINBURGH UNIVERSITY CLUB (OF LONDON) TRIENNIAL PRIZE.

A Prize of Twenty Guineas, open triennially, for competition in any of the Faculties by Graduates of not more than two years' standing, is offered by the Edinburgh University Club of London, for the best Essay on a subject prescribed by the Deans of the Faculties in rotation, subject to the approval of the Senatus. The Prize will be open in 1894.

1890. No award.	1891. <i>John Davidson, M.A.</i>
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III.—BRUCE OF GRANGEHILL AND FALKLAND'S PRIZE IN THE CLASSES OF LOGIC AND METAPHYSICS.

This Prize of £20 (with a supplementary Prize of £10 for the Junior Division of the Class) is awarded to the most distinguished student in this class, "on such conditions and competition as the Professor may direct, and on his decision," for excellence in the study of Logic and Metaphysics. It was founded in 1865, by Mrs Tyndall Bruce of Grangehill and Falkland, in commemoration of John Bruce, Professor of Logic and Metaphysics in the University, 1774-1786.

1888. { Wm. Ingram, M.A. } { William G. Smith } equal	| 1890. James Mitchell.
1889. Charles M. Douglas, M.A.	| 1891. Henry Barker.
	| 1892. <i>Hugh R. Mackintosh, M.A.</i>

¹ The names of University Prizemen are retained in the CALENDAR for five years.

IV.—GRAY PRIZES.

The Gray Prize Essay Fund was instituted in 1860, in terms of the Will of Simon Gray, Esq., of Mornington Crescent, London. It is under the management of Five Trustees, of whom W. Ritchie, D.D., of Duns, is the Secretary.

The Trustees of Gray's Prize Essay Fund offer this year, for competition, three prizes of £20, £10, £5 respectively, for the First, Second, and Third Essays in the order of Merit, on "Social Class Customs—their Causes, Evils, and Remedies."

Competitors must be Students in the University of Edinburgh, who at the commencement of the present Session (1891-92), were not of more than three years' standing, or entering then on the fourth Session, from their first matriculation in a University Curriculum. Each Essay submitted for competition must have a motto prefixed to it, and be accompanied with a *separate* sealed envelope, bearing this motto inscribed on it, and having enclosed the name and address of the Author; and these must be forwarded to the Secretary, the Rev. William Ritchie, D.D., Duns, on or before the 1st of September next. The length of each Essay must not exceed what may be read in an hour and half.

The Trustees made the awards for the Session 1890-91, as follows:—"The British Constitution compared with Modern Republics," 1st prize of £20 to James Kirk, Edinburgh; 2nd prize of £10 to Peter Campbell, Edinburgh; 3rd prize of £5 to C. T. Meyer, Edinburgh.

V.—DR MUIR'S PRIZES IN SANSKRIT AND COMPARATIVE PHILOLOGY.

In accordance with the intentions of the late Dr John Muir, and with the concurrence of Sir William Muir, the sum of £100, offered by Dr Muir in 1872 as a prize to the first candidate who should take the degree of Doctor of Science in Sanskrit and Comparative Philology within five years,—afterwards renewed, on the same terms, for another period of five years,—has now, together with the interest, been appropriated by the Senatus for Sanskrit and Comparative Philology Class Prizes. It is left to the discretion of the Professor to offer Class Prizes, not exceeding £25 in the aggregate, for competition.

1888. Hermann Walter
 „ Al. Douglas Thomson
 „ George Douglas } equal
 „ John Tennant }
 1889. G. A. Ferguson
 „ J. E. Wood
 1889. A. E. O'Flaherty

1890. John Maclellan
 „ E. Monteith Macphail
 1891. John Maclellan, M.A.
 „ William Menzies.
 „ John M. Tait.
 1892. No award.

VI.—SCOTT AND DUNBAR PRIZE.

This Prize, of the value of about £18, was founded in 1872 by the Rev. Hew Scott, D.D., of Anstruther Wester, for encouraging the study of the Greek Language in the University of Edinburgh. It is awarded to "the most deserving and learned student in the Greek Classes," after such Examination as may be directed by the Principal and the Professors of Divinity, Greek, and Humanity. The prize will not be awarded till further notice. *See* Deed of Foundation at p. 332 of CALENDAR, 1873-74.

1887. James C. Smith	| 1889. Patrick Duncan
1888. { J. A. Norrie } equal	| 1891. R. P. Davidson.
{ James Watt }	

VII.—THE COUSIN PRIZE.

This Prize, founded in connection with the Class of Fine Art by the late David Cousin, Esq., is of the annual value of about £14, 14s. 6d., and is awarded at the close of each session for proficiency in Class Essays set from time to time by the Professor. *See* Excerpt from Mr Cousin's will in CALENDAR 1880-81, p. 380.

1887. R. A. Falconer	| 1890. Duncan Mackenzie
1888. David J. Vallance	| 1891. J. Malcolm Tait.
1889. Johnstone Murray	| 1892. W. M. Souter, M.A.

VIII.—KELLAND MEMORIAL PRIZE.

The Committee for promoting a Memorial to the late Professor Kelland has handed over to the University the sum of £147, 10s., for the purpose of founding a Prize to be called the "Kelland Memorial Prize," to be awarded annually to the most distinguished Student in Pure Geometry in the Junior Mathematics Class.

III.—SCHOLARSHIPS.¹

I.—PITT CLUB CLASSICAL SCHOLARSHIP.

The Pitt Club Scholarship of the annual value of £57, 10s. 4d., tenable for four years. By ordinance No. 17 of the Scottish Universities' Commissioners it is open for competition to all who have passed regularly through the Course in Arts in the University, and have been admitted to the Degree of M.A. in Edinburgh, at any time within four years before the competition takes place. The subjects embraced in the examination are CLASSICS and ENGLISH LITERATURE. The next competition will take place in December 1892.

1888. *Norman M'Lean, M.A.*

¹ The names of University Scholars are retained in the CALENDAR for five years.

II.—MACKENZIE CLASSICAL SCHOLARSHIP.

This Scholarship was founded in 1862, by James Mackenzie, Esq., W.S., and is of the annual value of £121, 10s., tenable for not more than four years. By ordinance No. 90 of the Scottish Universities' Commissioners, it is open for competition to all Graduates in Arts in the University of Edinburgh of not more than three years' standing at the time of the competition. Candidates are examined in CLASSICAL LITERATURE and in ENGLISH LITERATURE, and the Examination is conducted by three or more Examiners selected by the Senatus from their own body. It cannot be held along with any other Scholarship, Fellowship, or Bursary, of any Scottish University. The Examinations include—1. Translations from Latin and Greek authors; 2. Composition in Latin and Greek Prose; 3. Latin and Greek Literature, and History; 4. English Essay-Writing; 5. History of English Literature. The next competition will take place in December 1892.

1888. *George Smith, M.A.*

III.—SIR DAVID BAXTER MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of £61, 15s. 10d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-5, p. 171) it is awarded for proficiency in the department of Mathematics, particularly in that branch of it which includes mechanical and physical science. Competitors must be Graduates in Arts of the University, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mathematics. The next competition will take place in December 1893.

1890. *Charles E. Grange, M.A.*

IV.—SIR DAVID BAXTER PHILOSOPHICAL SCHOLARSHIP.

This Scholarship, also founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of £61, 15s. 10d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-5, p. 171), it is awarded for proficiency in the Department of Mental Philosophy. Competitors must be Graduates in Arts of the University, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mental Philosophy. The subjects of examination are Logic, Metaphysics, and Moral Philosophy. The next competition will take place in December 1894.

1886. *George W. Stewart, M.A.* | 1890. *Duncan MacKenzie, M.A.*

V.-VII.—JOHN EDWARD BAXTER SCHOLARSHIPS.

These Scholarships were founded in 1876, and are three in number, each of the annual value of about £92, and tenable for three years. One is in the Department of Classical Literature, another in Mental Philosophy, and the third in Mathematics and Natural Philosophy. They are open for competition to all Masters of Arts of the University of not more than three years' standing at the time of the competition. The Scholarship in *Classics* will be competed for in December 1892. See Deed of Foundation at p. 361 of Calendar for 1877-78.

1888. David B. Mair, M.A. (Ma.)	1891. { <i>W. E. Philip, M.A.</i> } equal { <i>J. I. Craig, M.A. (Ma.)</i> }
1889. Patrick Duncan, M.A. (Cl.)	
1890. W. G. Smith, M.A. (Ph.)	

VIII.—DRUMMOND MATHEMATICAL SCHOLARSHIP.

This Scholarship was founded in 1865 by Miss Elizabeth Drummond, in memory of her brother, Captain Drummond, R.E., Under Secretary for Ireland. It is of the annual value of £105, 12s. 6d., and is tenable for three years. By the Deed of Foundation (given at p. 198 of CALENDAR for 1865-6), it is open to Graduates in Arts of not more than three years' standing, who have graduated with Honours in the Department of Mathematics. It cannot be held with any other Bursary or Scholarship, and the holder is recommended to travel for the purpose of inspecting, in this and other countries, remarkable engineering and architectural structures, to extend his knowledge of the practical application of Mathematical principles; and, if required by the Senatus Academicus, to deliver reports on the principal structures examined by him, and the Mathematical principles exemplified thereby; which reports the Senatus may cause to be publicly read in the University or elsewhere in Edinburgh. The next competition will take place in December 1893.

1890. *James Goodwillie, M.A.*

IX.—BRUCE OF GRANGEHILL AND FALKLAND'S CLASSICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for three years, during two of which the studies of the Scholar must be prosecuted in the University of Edinburgh, but in the third year they may be prosecuted in an English or Foreign University. By the terms of the Deed of Foundation (given at p. 205 of the CALENDAR for 1866-7), this and the two following Scholarships held by Students who have passed their Examinations for the Degree of Master of Arts with Honours, being hitherto conferred upon the most distinguished in that one of the Honours Departments

which is appropriated for each year. The Scholarship cannot be conferred upon any one whose age exceeds twenty-three years, and it cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 per annum. The next award will be made in April 1894.

1888. James G. Goold, M.A. | 1891. *W. G. Wadderspoon, M.A.*

X.—BRUCE OF GRANGEHILL AND FALKLAND'S SCHOLARSHIP IN MENTAL PHILOSOPHY.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Logic and Psychology, Metaphysics, Moral Philosophy, and History of Philosophy. The next award will be made in April 1895.

1889. W. G. Smith, M.A. | 1892. *Hugh R. Mackintosh, M.A.*

XI.—BRUCE OF GRANGEHILL AND FALKLAND'S MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Mathematics and Natural Philosophy. The next award will be made in April 1893.

1890. *Charles Tweedie, M.A.*

XII.-XIII.—GRAY SCHOLARSHIPS.

These two Scholarships, founded by Mr Gray of Baad Park in 1864, are each of the annual value of £44, and tenable for a period not exceeding two years. All candidates must pass the Examination for the Degree of Master of Arts. In making appointments the Senatus are directed to prefer in the first place candidates of the name of Gray; and secondly, such as have been born in the parishes of Midcalder or Kirknewton. Failing well qualified Candidates, who fulfil these conditions, the Scholarships may be awarded to distinguished candidates for the Degree in Arts in the Honours departments.

The scholars must proceed to study in one of the Faculties of Divinity, Law, or Medicine.

1888. William Gray, M.A.	| 1891. W. E. Philip, M.A.
1889. Walter T. Watson, M.A.	| 1892. <i>Robert G. M'Kerrou.</i>
1890. Arthur Herbert Gray, M.A.	|

XIV.—GILCHRIST SCHOLARSHIPS.

These Scholarships were founded in 1865 by the Trustees of the late Dr Gilchrist; they are three in number, each of the annual value of £100, and are open to natives of India who have passed competitive examinations at the Presidential Colleges of India. They are attached to the Medical, Law, and Literary Classes in the University.

XV.-XVII.—MISSES BAXTER OF BALGAVIE'S SCHOLARSHIPS.

These Scholarships were instituted in 1868 and 1878 by Miss Mary Baxter of Balgavie. They are three in number, two of the annual value of £40, the third of £20. They are in the gift of the Directors of the High School of Dundee, and are open for competition to all pupils who shall have finished their course at the time, or within one year previously, at that School. The examination is held in Dundee by examiners appointed by the Directors, and the subjects are Geometry, Algebra, Trigonometry, and Mechanical Drawing. The Scholarships are tenable for one year certain, and for a second if a favourable certificate is sent to the Directors by the Senatus Academicus. The patrons may extend the tenure of these Scholarships for a further period of one year, provided the holder shall have previously passed the First Examination for the Degree of Bachelor of Science in the Department of Engineering in this University. The Classes to be attended in the first year are Mathematics, Natural Philosophy, and Engineering; in the second year Chemistry, Engineering, and the second course of Natural Philosophy, and for the third year any two classes to be selected by the student, and approved by the Senatus.

These Scholarships are not to be held with any other Scholarship, Fellowship, or appointment yielding £50 per annum. *See* Deeds of Foundation, at page 255 of the CALENDAR for 1869-70, at p. 372 of CALENDAR for 1878-79, and at p. 377 of the CALENDAR for 1881-2.

XVIII.-XIX.—FETTES EXHIBITIONS.

These Exhibitions are each of the annual value of £60, and are tenable for four years. They are open annually for competition, one among the Foundationers alone, and the other among the Foundationers and such other pupils as have attended Fettes College regularly for not less than five years.

XX.-XXI.—RHIND SCHOLARSHIPS.

These Scholarships were, in accordance with the will of the late A. H. Rhind, Esq., of Sibster, founded by his trustees on the reversion of his estate. They are two in number, one in the Department of

Classical Literature, the other in that of Philosophy, are each of the annual value of £98, 10s., are tenable for two years, and are open to Under Graduates and to Graduates of not more than three years' standing at the time of the competition. Candidates who are Under-graduates must have completed at least three Sessions in the regular Curriculum in Arts. and have obtained at least two Departmental Certificates. The successful Candidates may be required to undertake duties connected with the teaching of the University, or otherwise assist in some department of its operations. *See* Deed of Foundation at p. 323 of CALENDAR for 1874-75. The next competition will take place in December 1893.

1888. Wm. Ingram, M.A. (Ph.)

1888. Thomas R. Mills (Cl.)

1891. Lapsed Scholarship in Phil-
osophy, John Davidson.

1892. *J. Lewis McIntyre, M.A.*

(Ph.)

„ *R. P. Davidson, M.A. (Cl.)*

XXII.—SCHOLARSHIPS IN MUSIC.

By the will of Signor Theophile Bucher, who died in 1871, his trustees were enjoined (on the death of a liferentrix, who died in March 1889) to pay over the residue of his estate, amounting to about £4000, to the Senatus and Curators of the University for the purpose of founding one or more Scholarships of music to be held by any young men born in Scotland, who may shew a natural talent for music and wish to make it their profession, for the purpose of improving their education, and enabling them to prosecute the study of the science and art of music in Italy, Germany, and France.

XXIII.—THE CHARLES MACLAREN SCHOLARSHIP.

This Scholarship, founded in 1871 by the Trustees of Mrs Maclaren, in memory of Charles Maclaren, Esq., the eminent geologist, is of the annual value of £95, 19s. 2d., and is tenable for three years. It is for the encouragement of the study of Mathematics and Natural Philosophy, and is open to all graduates in Arts of not more than three years' standing at the time of the Competition (and under 30 years of age) who shall have taken honours in Mathematics. The successful competitors are to spend a few months in travelling and in examining remarkable Engineering and Architectural Structures, and to report to the Senatus, which report the Senatus may cause to be publicly read in the University. The Deed of Foundation is given at p. 324 of CALENDAR for 1873-74. The next competition may be in December 1893.

1890. *Jas. F. McKean, M.A.*

XXIV.—NEIL ARNOTT SCHOLARSHIP FOR EXPERIMENTAL PHYSICS.

This Scholarship, value about £38, 10s., was founded in 1874, and is awarded annually to the most distinguished Student in the Physical Laboratory of the University.

The recipient must, during the ensuing Summer and Winter Sessions assist the Professor of Natural Philosophy in the Laboratory. Failing a Student deemed by the Professor worthy of the Scholarship, it may be given to the Candidate for a Degree in Arts who has undergone the Examination in Natural Philosophy with most distinction. *See* Deed of Foundation, at p. 340 of CALENDAR for 1875-76.

1888. J. W. Butters.

1889. James Rennie.

1890. P. F. Gillies.

1891. T. C. Baillie.

1892. H. Walker.

XXV.-XXVII.—FERGUSON SCHOLARSHIPS.

The examination of Candidates for Three of these Scholarships will be held in Glasgow, on Tuesday, 27th September 1892, and following day. One of the Scholarships to be awarded for the greatest proficiency in Classics; one for the greatest proficiency in Mathematics, including Natural Philosophy; and one for the greatest proficiency in Mental Philosophy, including Logic, Metaphysics, and Ethics.

Subjects for Examination :—

CLASSICAL SCHOLARSHIP.

Latin—

Plautus, "Mostellaria," "Men-
aechmi."

Virgil, "Eclogues" and
"Aeneid," I.-III.

Horace, "Odes," "Epistles."

Cicero, "ad Atticum," IV.-
VII., "ad Fam.," II., VIII.

Tacitus, "Histories."

Pliny, "Epistles."

Translation from Authors not
prescribed.

Latin Prose Composition.

Greek—

Homer, "Iliad," XVIII.-
XXIV.

Aeschylus, "Agamemnon,"
"Choephoroe," "Eumen-
ides."

Alcaeus, Sappho, Simonides of
Ceos, the fragments of.

Herodotus, I.-III.

Thucydides, III., IV.

Aristotle, "de Re Publica
Atheniensium."

Translation from Authors not
prescribed.

Greek Prose Composition.

Questions on Greek and Roman History, Literature, Language, and Antiquities.

The Questions will bear chiefly on the books prescribed.

MATHEMATICAL SCHOLARSHIP.

Mathematics—Euclid's Elements. Modern Geometry.

Algebra, including Determinants, Finite Differences, and Theory of Equations.

Trigonometry, Plane and Spherical.

Analytical Geometry, in Two and Three Dimensions.

Differential and Integral Calculus, and Differential Equations.

Natural Philosophy—Abstract Dynamics (commonly called Mechanics) including Kinematics and Statics and Kinetics of Solids and Fluids.

Experimental Physics and Applied Mathematics, including all the ordinary subjects treated in Lectures on Natural Philosophy.

PHILOSOPHICAL SCHOLARSHIP.

Logic—Province and History of Logic. Logical Forms of Notions, of Judgments, and of Inferences. Fallacies and their Causes. Evidence. Authority and Historical Proof. Physical Science and its Methods. Recent Discussions affecting Logic.

Metaphysics—Psychology and Ontology. Nature, Origin, and Limits of Man's Knowledge of Self, the Material World, and God. History and Critical Analysis of Ancient and Modern Metaphysical Systems.

Moral Philosophy—Psychology and Metaphysic of Ethics. Moral Faculty, Motives, and Will. Moral Government of the World and cognate Questions. Applied Ethics, including relations of Ethics to Law and Politics. History and Critical Analysis of Ancient and Modern Ethical Theories.

The Competition will be open to all persons who have passed the last of the Examinations required for the degree of Master of Arts in one of the Universities of Scotland (whether taking the degree at the same time or not) within two years immediately preceding, and who have not already gained one of these Scholarships or competed more than once previously for any of them.

The Examinations will be conducted in writing, and the Scholarships awarded on the report of the Examiners as to the merit of the Candidates, but the minimum of 600 out of 1000 marks must be reached in order to entitle to a Scholarship.

The Scholarships of £80 each per annum are tenable for two years, subject to fulfilment of the following Rule of the Trustees :—

“Persons gaining the Scholarships will, during the tenure thereof, be expected to prosecute studies in furtherance of the higher learning; and those who have not graduated shall be required to do so before the last payment is made. Any case of conduct unbecoming a scholar and a gentleman shall incur forfeiture of the Scholarship, of which the Trustees shall be sole judges.”

Certificates will be granted to such of the unsuccessful Competitors as, in the opinion of the Examiners, shall have taken a distinguished position in the Examinations.

Candidates are requested to give in their names, personally or by letter, at the Office of The Ferguson Bequest Fund, 94 Bath Street, Glasgow, now or any time before 1st September 1892, and due intimation will be sent to those enrolled, as to the place and hours of Examination.

The following Students of the University of Edinburgh have obtained Ferguson Scholarships during the last five years :—

1888. David Beveridge Mair, Math.	1889. James Cruickshanks Smith,
„ T. E. Sandeman, M.A., Phil.	M.A., Cl.

PRESENT HOLDERS OF THE SCHOLARSHIPS.

1890. *Patrick Duncan*, M.A. of Edinburgh University. Classics.
 „ *Abraham Levine*, M.A. of Glasgow University. Mathematics.
 „ *Charles Mackinnon Douglas*, M.A. of Edin. Univ. Philosophy.
 1891. *William Menzies*, of St Andrew's University. Classics.
 „ *James Holm*, of Glas. and Edin. Universities. Mathematics.
 „ *Henry Barker*, M.A. of Edinburgh University. Philosophy.

XXVIII.-XXXIX. VANS DUNLOP SCHOLARSHIPS.

TWELVE VANS DUNLOP SCHOLARSHIPS, each of the annual value of £100, and tenable for three years, are, by the Deed of Foundation, appropriated to the following subjects :—1. English Literature and Poetry; 2. Classical Learning—Latin and Greek; 3. Engineering and the Mechanical and Useful Arts; 4. Commercial and Political Economy and Mercantile Law; 5. Logic and Metaphysics; 6. Natural Philosophy; 7. Mathematics; 8. Hebrew and Oriental (Semitic) Languages; 9. History; 10. Moral Philosophy; 11. Sanskrit; 12. Agriculture. In terms of the Trust-Disposition (which is given at p. 350 of CALENDAR for 1880-81), the Scholarships are given only for “distinguished proficiency” in the various subjects of competition, as determined by the Examiners and the Senatus Academicus.

The following are the General Regulations for the Examinations :—

In the Competitions for these Scholarships, Candidates must have regularly attended in at least one class in the University of Edinburgh during each Winter Session in which they claim to have been Matriculated Students, and no Candidate is eligible who has discontinued attendance at the University for more than one year.

Each Scholarship is tenable on condition that the Scholar submits annually to the University evidence that he is prosecuting his studies, or his professional work, in a manner satisfactory to the Senatus. The evidence may consist of—(1.) Certificates of attendance on Lectures or Laboratories in this or some other University; or (2.) Certificate of having acted as Assistant to a Professor in this or some other University; or (3.) A written Report of work done by the Scholar during the year, together with a Thesis composed by himself on a subject connected with that work.

Not more than one of these Scholarships can be held by the same person, and Vans Dunlop Scholars cannot hold any other Fellowship, Scholarship, or Bursary in the University of Edinburgh.

Candidates for each of the Vans Dunlop Scholarships must enter their names and addresses *at least one month* before the date of the commencement of each examination, at the *Secretary's Office, University, Edinburgh*, and produce evidence that they have fulfilled the conditions as to eligibility of Candidates.

In the case of Scholarships where attendance on classes may be discontinued for not more than one year, Candidates are required to pay the Matriculation Fee for the year in which the competition takes place.

The names of Candidates highly distinguished in the Vans Dunlop Scholarship examinations may be published.

XXVIII.—ENGLISH LITERATURE AND POETRY.

Candidates are subjected to an Examination testing—(1.) Knowledge of the History of English Literature generally, and more particularly through a prescribed period; (2.) Acquaintance with certain books, chiefly of English Poetry, prescribed for special reading; (3.) Ability in English Composition, in the form of an Essay, written in the Examination Room, on some subject of literary criticism.

The Competition is open to all Matriculated Students in the second, third, or fourth year of their Matriculation, who have given regular attendance in the Class of Rhetoric and English Literature. The next Competition will take place in April 1894.

The Professor of Rhetoric and English Literature, and an Examiner appointed by the Senatus, are the Examiners.

1888. James C. Smith.

Proxime accessit, Louis G. Irvine

1891. *George Liddell*.

Proxime accesserunt, And. Hamilton, M.A., and Stewart A. Robertson.

XXIX.—CLASSICAL LEARNING—LATIN AND GREEK.

1. *Latin*.—The Examination will test :—

- (a.) Knowledge of Latin books and special subjects previously prescribed.
- (b.) Power of Latin Composition, and of translating from Latin authors not previously prescribed.

2. *Greek*.—(a.) Knowledge of Greek books previously prescribed.

- (b.) Power of Greek Composition, and of translating from Greek authors not prescribed.
- (c.) Knowledge of Greek History and Literature.

The Competition is open to Matriculated Students in their second, third, or fourth Session who have completed attendance in the Latin and Greek Classes necessary for graduation in Arts.

Any one who in the previous April may have completed his course for graduation in Arts in three Sessions may take part in the Competition, although not actually a Student in the Session during which the Examination takes place. The next Competition will take place in October 1893.

The Professors of Humanity and Greek are the Examiners.

1890. *J. A. Norrie.*

XXX.—ENGINEERING AND MECHANICAL AND USEFUL ARTS.

The Examination is similar to that for the Second B.Sc. Examination for the degree in Engineering, with the addition of questions on prescribed books treating of Engineering and Mechanical and useful Arts.

The Competition is open to all Matriculated Students who have been in regular attendance on the Class of Engineering for at least two Winter Sessions, and who have not been Students of the University for more than four years. The conditions of tenure of this Scholarship may be altered before the next election. The next Competition will take place in April 1894.

The Examiners are the Professors of Engineering and Natural Philosophy.

1888. *J. T. Nicolson.*

| 1891. *J. R. Dick, B.Sc.*

XXXI.—COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

(a.) Candidates are subject to an Examination testing their knowledge (1.) of Commercial and Political Economy, and (2.) of Mercantile Law—two papers on the former and one on the latter.

(b.) The Competition is open to all who have been Matriculated Students for not less than two years, and who have regularly attended

the Class of Commercial and Political Economy and Mercantile Law. The next Competition will take place in October 1892.

(c.) The Professor of Political Economy and an Examiner nominated by the Senatus are the Examiners.

1888. *And. H. B. Constable, M.A.*

Prox. access., J. M. Irvine, M.A., B.Sc.

1891. No award.

XXXII.—LOGIC AND METAPHYSICS.

The Examination will test knowledge of (a.) Psychology, (b.) Logic, (c.) Metaphysics and the History of Philosophy. It will include the subjects embraced in the Lectures on each of these branches; also prescribed Reading and Studies of special subjects.

The Competition is open to all who have been Matriculated Students for not less than two nor more than six years, and who have regularly attended the Junior and Advanced Classes of Logic and Metaphysics. The next Competition will take place in April 1894.

The Professor of Logic and Metaphysics and the Professor of Moral Philosophy are the Examiners.

1888. *Thomas E. Sandeman, M.A.* | 1891. *Henry Barker, M.A.*

XXXIII.—NATURAL PHILOSOPHY.

The Examination will test the knowledge of the Candidates in Experimental Physics and Applied Mathematics. The Competition is restricted to Matriculated Students who have passed at least two and not more than six Sessions at the University, and who have attended the classes of Natural Philosophy. The next Examination will take place in April 1895.

The Professor of Natural Philosophy and an Examiner appointed by the Senatus are the Examiners.

1889. *A. W. Duff, M.A.*

XXXIV.—MATHEMATICS.

The Examination will test Candidates in pure mathematical subjects in the Honours Department for the Degree of Master of Arts, and in special subjects to be prescribed by the Examiners from time to time. The Competition is confined to Matriculated Students who have passed at least two and not more than six complete Sessions at the University of Edinburgh, and who have attended at least two of the Mathematical Classes, one of these being the third or Advanced Class. No student is eligible who has discontinued attendance at the University for more than a year. The next Examination will take place in April 1895.

The Professor of Mathematics and an Examiner appointed by the Senatus are the Examiners.

1889. *J. I. Craig, M.A.*

1892. *William Leslie Thomson, M.A.*

XXXV.—HEBREW AND ORIENTAL (SEMITIC) LANGUAGES.

The Competition is open to all Matriculated Students (*a*) who have regularly attended Classes in the University for not less than two and not more than seven years, (*b*) who have attended at least two courses under the Professor of Hebrew and Oriental Languages.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Oriental Languages, and an Examiner appointed by the Senatus. The next Competition will take place in 1893.

1890. $\left\{ \begin{array}{l} \text{James Thomson, M.A.} \\ \text{Charles H. Titterton,} \\ \text{M.A.} \end{array} \right\}$ equal.

XXXVI.—HISTORY.

The Competition is open to all Matriculated Students who have regularly attended classes in the University for not less than two and not more than six years, and who have also attended one or more courses of Lectures either by the Professor of History or by the Professor of Ecclesiastical History.

The Scholarship will be awarded by competitive examination. The Examiners are the Professor of History, the Professor of Ecclesiastical History, and either the Professor of Humanity or the Professor of Greek. The next Competition will take place in October 1892.

1889. *David P. Heatley.*

XXXVII.—MORAL PHILOSOPHY.

The Competition is open to all who have been Matriculated Students for not less than two nor more than six years, and who have regularly attended the Ordinary and Advanced Classes of Moral Philosophy.

The Professor of Moral Philosophy and the Professor of Logic and Metaphysics are the Examiners. The next Competition will take place in April 1895.

1888. (Lapsed) W. B. Tough, M.A.	| 1892. <i>John Davidson, M.A.</i>
1889. Charles M. Douglas, M.A.	
1890. W. B. Ingram, M.A.	
(Lapsed Scholarship for 1 year.)	

XXXVIII.—SANSKRIT AND COMPARATIVE PHILOLOGY.

The Competition is open to all Matriculated Students who have regularly attended classes in the University for not less than two and not

more than seven years ; and who have also attended at least two courses under the Professor of Sanskrit and Comparative Philology.

The Examiners are the Professor of Sanskrit and Comparative Philology, and another Examiner to be appointed by the Senatus. The next Competition will take place in April 1895.

1889. Hermann Walter. | 1892. *John Maclellan, M.A.*

XXXIX.—AGRICULTURE AND RURAL ECONOMY.

This Scholarship is open to all Matriculated Students who have regularly attended classes in the University for not less than two and not more than six years, and who have attended the Class of Agriculture and Rural Economy within two years of the date of Competition. The subjects of Examination are Agriculture, Chemistry, Botany, and Veterinary Science. The next Competition will take place in April 1895.

The Examiners are the Professor of Agriculture and an Examiner nominated by the Senatus.

1889. Thos. H. Middleton, B.Sc. | 1892. *T. A. Coward.*

XL.—SKIRVING SCHOLARSHIP FOR MORAL PHILOSOPHY.

This scholarship is to be founded (after the death of an annuitant) in accordance with the Will of the late David Skirving, of No. 13 Westbourne Park, London. It will be of the annual value of about £50. and tenable for three years. *See* Deed of Foundation at p. 350 of CALENDAR for 1876-77.

XLI.-XLIV.—LANG SCHOLARSHIPS.

This is a Bequest by the late John Lang, Esq. of Warren Park, Ayrshire, with the object of founding four Scholarships, to be called the "Lang Scholarships," one in Natural Philosophy, one in Mathematics, one in Chemistry, and one in Botany. The capital sum will be payable on the death of the survivor of two liferenters.

XLV.—STEVEN SCHOLARSHIP IN AGRICULTURE.

This Scholarship was founded in 1882 by the Misses Steven of Bellahouston in memory of their brother Moses Steven, Esq. It is of the value of £75, and is awarded annually, in connection with the Class of Agriculture, the subjects of examination being Agriculture and General and Agricultural Chemistry.

The Scholar is required to visit the annual exhibitions of the four leading agricultural societies, or such as the Professor of Agriculture shall appoint, and to report on his visit or visits to the satisfaction of

the Professor of Agriculture. The Exhibitions which the Scholar is required to visit are :—

The Royal Agricultural Society of England.
The Bath and West of England Agricultural Society,
The Highland and Agricultural Society of Scotland.
Royal Agricultural Society of Ireland.

See Deed of Foundation at p. 397 of CALENDAR for 1882-83.

1888. John J. Jeffrey

1889. Douglas A. Gilchrist

1890. Henry Crabtree

1891. John Campbell.

1892. George P. Foaden.

XLVI.—MACKAY SMITH SCHOLARSHIP IN NATURAL PHILOSOPHY.

This Scholarship is of the annual value of £25, tenable for two years, and is open for competition to Students who have attended the Class of Natural Philosophy in this University. The successful candidate is required to attend the class of Natural Philosophy, or to prosecute the study of Natural Philosophy, during at least one year of his tenure of the Scholarship, in such way as the Senatus may direct or approve. The next award may be made at the end of Winter Session of 1893-94.

1888. Alex. Wilmer Duff, M.A.

1889. J. F. M'Kean, M.A.

1890. James Holm.

XLVII. THE ARTHUR TREVELYAN SCHOLARSHIP IN ENGINEERING.

The Arthur Trevelyan Scholarship, of about £40 per annum, is for proficiency in Engineering and the mechanical and useful arts under such conditions as the Senatus may prescribe. *See* Excerpts from Deed, p. 538 of CALENDAR for 1892-93.

IV.—FELLOWSHIPS.

I.—GUTHRIE FELLOWSHIP IN CLASSICAL LITERATURE.

This fellowship, founded in 1866 by James Guthrie, Esq., London, is of the annual value of £93, 15s., and is tenable for four years. By the terms of the Deed of Foundation (given at p. 210 of the CALENDAR for 1866-7) it is for proficiency in Classical Literature, and is open to Graduates in Arts of the University who have taken their Degree since the last competition. Students who have passed all their examinations for a Degree since the last competition, but have deferred graduating, are also eligible. It cannot be held along with any other Fellowship or

Scholarship in a Scottish University. The next Competition will take place in December 1894.

1890. J. C. Smith, M.A.

| 1890. James Watt, M.A. (Lapsed
Scholarship for two years)

II.—SIR WILLIAM HAMILTON FELLOWSHIP IN MENTAL PHILOSOPHY.

This Fellowship, founded in 1866 by the Subscribers to the fund for a Memorial to the late Professor Sir William Hamilton, and by the Association for the better endowment of the University, is of the annual value of £97, 5s., and is tenable for three years. By the Deed of Foundation (given at p. 213 of CALENDAR for 1866-67), the Fellowship is open to all Graduates in Arts of the University of Edinburgh of not more than three years' standing at the time of the competition. It cannot be held along with any other Scholarship or Fellowship in a Scottish University. The subjects of examination are Logic, Metaphysics, Moral Philosophy, and the History of Philosophy. The next Competition will take place in December 1893.

1888. J. Lorrain Smith, M.A.

| 1890. C. M. Douglas, M.A.

III.—SHAW FELLOWSHIP IN MENTAL PHILOSOPHY.

This Fellowship, founded in 1867 by Contributors to a Memorial to Sir James Shaw, Bart., a native of Ayrshire, afterwards Lord Mayor of, and M.P. for, London, and by the Association for the better endowment of the University, for the encouragement of the study of Logic, Psychology, Metaphysics, Moral Philosophy, and the History of Philosophy, is awarded after competitive examination on these subjects. It is open to Graduates in Arts of any of the four Scottish Universities, of not more than five years' standing at the time of the competition, is of the annual value of £161, 12s. 6d., and is tenable for five years. It cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University, and it is not open to the competition of any person who already holds a Fellowship in any English or Irish University, though the holder of the Shaw Fellowship will not be precluded from afterwards obtaining an English or Irish Fellowship. The holder is required during the fourth or fifth year of his tenure of the Fellowship to deliver in this University a Course of four Lectures on any of the subjects for the encouragement of the study of which the Fellowship was founded. The next Competition for the Fellowship will take place on 20th and

21st December 1893. (Deed of Foundation, p. 237 of CALENDAR for 1868-9.)

1888. *William Caldwell, M.A.*

Proxime accessit, J. Lorrain Smith, M.A.

WILLIAM DICKSON TRAVELLING FUND.

This Fund (the interest of which amounts to about £100 per annum) has been established for the purpose of assisting Graduates of any Faculty, of not more than Three Years' standing, to travel, for a shorter or longer period, for purposes of study or research. Grants from the Fund may be made to holders of Scholarships, Bursaries, &c.

Applicants are required to state—“(1) The purpose for which the Applicants desire to get a Grant for travelling; (2) the total amount of expenditure thought necessary; (3) the other means they have towards meeting this expenditure; and (4) the amount of the Grant required from the Fund.”

The award of a grant to be based on—“(1) The importance of the work proposed to be undertaken; (2) the sufficiency of the means proposed to be applied to the work; (3) the capability of the Applicants for the work they respectively propose to undertake.”

“Holders of Grants in all cases to satisfy the Senatus by periodical reports that they are carrying out satisfactorily the work or investigation undertaken; and to present a final report, or to deliver a course of public University Lectures on their work when completed.”

Applications must be lodged with the *Secretary of Senatus* on or before 15th March annually.

For Deed of Endowment, see p. 514 of CALENDAR 1889-90.

1891. David Anderson, M.A., LL.B.; Alexander Grieve, M.A.; W. Allen Neilson, M.A.; Archibald Paterson, M.A.

1892. *G. S. Corstorphine. B.Sc.*, £21; *John Davidson, M.A.*, £21; *Carstairs Douglas, M.B., C.M.*, £21; *James Thomson, M.A.*, £21.

SCHOLARSHIPS, UNIVERSITY PRIZES, AND BURSARIES,
OPEN FOR COMPETITION IN THE FACULTY OF ARTS DURING
THE ACADEMIC YEAR COMMENCING 1ST OCTOBER 1892.¹²

Scholarships.²

1. *Mackenzie Scholarship in Classical and English Literature* (II., p. 212).

2. *John Edward Baxter Scholarship in Classics* (V., p. 213).

3. *Pitt Club Classical Scholarship* (I., p. 211).

Candidates for the foregoing Scholarships must give their names and addresses to the *Clerk of Senatus, University, Edinburgh*, before 1st December. The examinations will commence at ten o'clock on *Thursday, the 22nd of December 1892*, and will be continued on following days, at the same hour, in the *Examination Hall* of the University.

4. *Vans Dunlop Scholarship in Commercial and Political Economy and Mercantile Law* (XXXI., p. 221).

The works on Political Economy recommended to Candidates are:—

Adam Smith's *Wealth of Nations*.

Sidgwick's *Principles of Political Economy*.

Bastable's *Theory of Foreign Trade*.

Nicholson's *Money and Monetary Problems*.

Cunningham's *Growth of English Industry and Commerce*.

List's *National System of Political Economy*.

Nicholl's *History of the English Poor Law*; and *History of the Scotch Poor Law*.

Rae's *Contemporary Socialism*.

Those on Mercantile Law:—

Bell's *Commentaries*, Book ii., part 3, chap. 2.

„ „ Book iii., part 1, chap. 2, sec. 4.

„ „ „ „ chap. 3, sec. 1.

Benjamin on Sales (3rd ed.).

Smith's *Mercantile Law* (10th ed.).

Chalmers's *Bills of Exchange* (3rd ed.).

Lindley on *Companies*.

The Competition will take place after the Graduation Examinations in Law in November 1892.

¹ N.B.—The values of the Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise and fall of the rate of interest, &c.

² For further information, and for information regarding Fellowships and other Scholarships, Bursaries, and Prizes, see under the heads of Scholarships, &c.

5. *Vans Dunlop Scholarship in History* (XXXVI., p. 223). The next competition will take place on the third Monday, Tuesday, and Wednesday of October 1892, beginning at 10 A.M. each day.

The subjects prescribed are :—

- (1.) "History of Great Britain from 1714 to 1820."
- (2.) "History of Scotland for a century and a half before the Union."
- (3.) "History of Greece from B.C. 500 to B.C. 400, with special reference to the growth of the Athenian Constitution."
- (4.) "History of France under Louis XIV."

6. *Vans Dunlop Scholarship in Hebrew and Oriental (Semitic) Languages* (XXXV., p. 223). The competition will take place on Tuesday, 21st March 1893, and following days, beginning at 10 A.M. each day.

The following are the subjects of examination :—

(a.) *Hebrew*.—The Third Book of Psalms, and the Books of Joshua, Zephaniah, and Haggai—to be known critically. Hebrew prose composition.

(b.) *Syriac*.—Grammar. The First Three Parts (41 pages) of Nestle's Chrestomathy. The Second Gospel (Peshîttâ Version). Translation into Syriac.

(c.) *Arabic*.—Socin's Grammar, with First Part of Chrestomathy A. Jacob's Arabic Chrestomathy. The *Ḳor'ân*, *Sûras* iii. and xxviii.-xxx. inclusive. Translation into Arabic.

7. *Bruce of Grangehill and Falkland's Mathematical Scholarship* (XI., p. 214).

8. *Gray Scholarship* (XII., p. 214).

9. *Neil Arnott Scholarship for Experimental Physics* (XXIV., p. 217).

10. *Steven Scholarship in Agriculture* (XLV., p. 224).

11, 12, 13. *Three Ferguson Scholarships* (XXV.-XXVII., p. 217).

14, 15. *Two Merchant Company Watson Fellowships*, to be named respectively, "The Merchant Company Watson Classical Fellowship," and "The Merchant Company Watson Mathematical Fellowship," each of the value of £100 per annum, tenable for two years, will be open to Students who, during the period of five years immediately preceding the date of the competition, have attended at least two Classes in the Faculty of Arts, and taken part in the Class Examinations, during each of not less than two Winter Sessions continuously at the University of Edinburgh. They will be awarded upon a Competitive Examination to be held in 14 Hanover Street, Edinburgh, on the 29th and 30th of September 1892.

The subjects of Examination, which will be conducted in writing, are :—

CLASSICAL FELLOWSHIP.

Latin.—(1) Lucretius, B. i., ii., iii.; Virg. *Aen.* ix.-xii.; Cicero, *de Oratore*, B. i., ii.; Livy, B. v.-vii. (2) Latin Prose Composition. (3) Translations from authors not prescribed.

Greek.—(1) Homer, *Iliad*, xii.-xviii.; Aristoph. *Acharn*, *Knights*, *Wasps*; Herodotus, B. vii., viii.; Plutarch, *Timoleon* and *Nicias* (Holden's editions). (2) Greek Prose Composition. (3) Translation from authors not prescribed.

The questions set on the books will be directed to testing a knowledge of their substance as well as of their language.

MATHEMATICAL FELLOWSHIP.

Mathematics.—Euclid's Elements. Modern Geometry. Algebra, including Determinants, Theory of Equations, Theory of Numbers, and Higher Algebra generally. Trigonometry, Plane and Spherical. Analytical Geometry, in Two and Three Dimensions. Differential and Integral Calculus, and Differential Equations.

Natural Philosophy.—Abstract Dynamics (commonly called Mechanics): including Kinematics, and Statics and Kinetics of Solids and Fluids. Experimental Physics and Applied Mathematics: including all the ordinary subjects treated in Lectures on Natural Philosophy.

Candidates are required to give in their names and addresses, along with the necessary Certificates, by letter addressed to the Secretary of the Merchant Company, The Merchants' Hall (from whom further information may be obtained), not later than 30th July 1892.

University Prizes in Arts.

1. The *William Dickson Travelling Fund* (p. 227).

2. The *Lord Rector's Prize*, of twenty-five guineas, for the best Essay on "The influence of commerce in shaping the destinies of nations in the ancient and modern world."

The Prize is open to Students of the University, and to Graduates of not more than two years' standing. Essays to be lodged with the Secretary of Senatus on or before 1st November, each Essay to be sent anonymously, distinguished by a motto, and accompanied by a sealed envelope containing the name, address, and University standing of the Candidate.

3. *Bruce of Grangehill and Falkland's Prizes* (III., p. 209).

4. *Neil Arnott Prize* of about £35, for *Medical Students* who shall pass, with greatest distinction the examination in Natural Philosophy for M.A. (I., p. 456).

5. *Cousin Prize in Fine Art*, of £14, 14s. 6d., for excellence in the Class of Fine Art (VII., p. 211).

6, 7, 8. *Gray Prizes* (IV., p. 210).

9. *Muir Prizes* (V., p. 210).

10 and 11. *Newton Bursaries or Prizes* (LXXIV., pp. 198 and 207).

12. *The Kelland Memorial Prize* (VIII., p. 211).

Bursaries in Arts.¹

The Annual Competitive Examinations for Bursaries in Arts will commence on *Saturday, the 15th of October* 1892, at Nine o'clock, in the *Examination Hall* of the University, and will be continued on the following *Monday*, at the same hour.¹

The names of the successful Candidates, and of others distinguished in the competition, will be published, in the order of merit, in the University Calendar, along with the names of schools from which they come, provided that they have matriculated and enrolled in the necessary classes for 1892-93.

1-4. *Four George Heriot Bursaries*, each of the value of £30 a year, tenable for three years. Subjects of examination:—(1) Latin; (2) Elementary Mathematics; (3) English; (4) Greek; (5) French and German; (6) Higher Mathematics. Each Candidate must take up subjects (1), (2), and (3), and must attain the pass standard in at least two of these subjects. He may, in addition, take up two, but not more than two, of subjects (4), (5), and (6). The examinations in English, Latin, Greek, and Elementary Mathematics will be the examinations in those subjects at the University Entrance and Bursary Examinations. The examination in Higher Mathematics will be in Pure Geometry. (Candidates are recommended to read Macdonald's *Higher Geometry*, Wilson's *Solid Geometry and Conic Sections*, and Casey's *Sequel to Euclid*, as partly indicating the scope of the examination in Geometry. What will be looked for is, not so much exhaustive knowledge of all the more intricate theorems, as a thorough knowledge of such as are more elementary and fundamental in their character, and ability to apply these in fairly straightforward exercises.) The examinations in French and German will take place in the University, on Friday, 14th October—French at 9 A.M., and German at 1 P.M.; and an additional examination in Mathematics on Tuesday, 18th October, at 9 A.M. Applications for these Bursaries must be made to the *Governors of George Heriot's Trust, Edinburgh*, not later than the 1st of October. Candidates who desire to be examined in French and

¹ The subjects and standard of the Examination for Bursaries will be the same as formerly, whether the new Ordinance comes into operation on 1st October or not.

German, or in Higher Mathematics, are required to state so in making application.

5. *First Patrick Bursary*, of about £80 a-year, tenable for two years, for those who have completed their School Education at Ayrshire schools or academies.

6. *Second Patrick Bursary*, of about £40 a-year, tenable for two years, for those who have completed their School Education at Ayrshire schools or academies.

7. *Jardine (Bidder) Bursary* of £42, 12s. a-year, tenable for four years.

8-10. *Three University Endowment Association Bursaries*, of the annual value of £20, tenable for three years.

11. *One Tyndall Bruce Bursary*, annual value £20 a-year, tenable for three years.

12. *One Sibbald Bursary*, of the annual value of £30, tenable for three years. Names of Candidates to be sent to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh, before 1st October.

13. *Thomson Bursary*, £25 a-year, tenable for four years. Apply to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, on or before 30th September.

14. *Mann Bursary*, of £26, 13s. 4d. a-year, tenable for three years. Candidates must be sons of residents in the town of Nairn, *i.e.*, one or other of their parents must have resided within the municipal boundaries for at least twelve months at some period prior to the competition. Should there be no qualified Candidate of the first year for this Bursary, a notice will be posted at the College gate soon after the Bursary Competition. Other Preferential Candidates must then lodge their claims within one week after the notice appears on the Board.

15. *Fairbairn Bursary* of £33, 9s. 4d. a-year, tenable for one year and a half.

16. *Blair Bursary* of £10 a-year for three years.

17, 18. *Two Mackinnon Bursaries*, of £18, 15s. a-year each, tenable for three years. Candidates must be natives of the Counties of Argyll, Bute and Arran, Inverness, Ross, or Sutherland, and must be examined in Gaelic.

19. *M^rDiarmid Bursary*, of £10, tenable for three years, restricted to natives of the County of Dumfries and Stewartry of Kirkcudbright. Apply to H. Gordon, Esq., Dumfries.

20. *Marshall Bursary*, of £37, 10s., tenable for four years—restricted in the first place to relatives of the Founder, then to those of the name of Marshall.

21. *One Jardine of Thorlieshope Bursary*, of the annual value of £38, 2s., and tenable for four years. Natives of the rural districts

of Roxburghshire and Dumfriesshire to be preferred. The Bursars are required to attend the classes necessary for the Degree in Arts, and to take the Degree at the end of the course. In the event of there being no first year Students, the Bursary will be thrown open to competition for one year only to second, third, or fourth years' Students in succession.

22. *Renton Bursary*, of about £18, 8s. 6d., tenable for one year, is for a Student pursuing his studies in the classes of Natural Philosophy, Mathematics, Chemistry, and Political Economy, or such of these classes as he may consider proper, and whose circumstances may require such assistance. The Bursary cannot be held by any one under the age of sixteen or above twenty-one. The Bursar shall cease to hold this Bursary if during the same session he shall be appointed to another Bursary of the value of £30 or upwards. The Examination is in English and Elementary Mathematics, and will take place on Saturday, November 5, at 10 o'clock. Names of Candidates to be entered at the Matriculation Office, on or before 1st November.

23. The *Donald Fraser Bursary*, of £50, for high merit in the University Class of Natural Philosophy combined with proficiency in Laboratory Work, is awarded annually at the end of the Winter Session.

The subjects of examination for Bursaries¹ Nos. 1 to 16, inclusively, in the above list, are Latin, Greek, Mathematics, and English Grammar and Composition; except Nos. 1 to 4 inclusively, in which additional subjects are stated above. The examinations will be held as follows:—*Friday, 14th*, French, 9 A.M., and German, 1 P.M., for the Heriot Bursaries; *Saturday, 15th October*, Latin, 9; Greek, 1. *Monday, 17th*, Mathematics, 9; English, 1. *No special books prescribed or announced to Candidates.* Higher Mathematics, for the Heriot Bursaries, *Tuesday, 18th*, at 9 A.M.—The examinations in Latin and Greek include the papers set at the same time for the Three Sessions' Curriculum, so that Candidates for the latter may compete also for the Bursaries; and the examinations in Mathematics in like manner include those for the Entrance Examination in Mathematics.

EXAMINATION FOR PREFERENTIAL BURSARIES. — Preferential Candidates for Nos. 17 to 21 inclusively, must enter their names and addresses, and lodge evidence of their preferential claims, at the Matriculation Office, University, Edinburgh, *on or before 1st October*. If no Preferential Candidates are then announced for the Bursaries, they will be disposed of, in open competition or otherwise, in terms of the Deeds of Foundation.

Preferential Candidates will be tested by an examination (*more elementary than that required for the Three Sessions' Curriculum*) in Latin, Greek, Mathematics (including Arithmetic), and English. The Examination in Latin and Greek will include easy unseen passages

¹ See note 1, page 231.

for translation into English, Grammatical questions, a simple piece of English for Latin Prose, and some easy sentences to be translated into Greek. This Examination will be held in the University, on *Saturday, 22nd October 1892*, Latin, 9 A.M.; Greek, 10.30; Mathematics, 1 P.M.; English, 2.30; Gaelic for Nos. 17 and 18, 18th October, at 9 A.M. (If any Preferential Candidates desire *also* to take a 'Three Sessions' Curriculum, or to compete for open Bursaries, they must *likewise* present themselves at the Three Sessions' Curriculum examination,¹ on the 15th October and following days, but not otherwise.) County Clubs, &c., which prefer this examination, may avail themselves of it for their candidates, giving due intimation of this at the Matriculation Office.

FOR STUDENTS ENTERING THE SECOND SESSION IN ARTS.

1. *Tyndall Bruce Bursary*, £35 a-year, for three years.
2. *Do.* of £35 a-year, tenable for a year and a half.

- 3, 4. *Two Stewart Bursaries*, each £10 a-year, for three years.

The subjects of examination for the University *Second Session* Bursaries are Latin, Greek, and Mathematics.

The following subjects are prescribed for the examinations in Latin and Greek:—*Latin*—Horace, *Epodes*; Martial (Selections by Sellar and Ramsay), Bks. i., ii., iii.; Cicero, *In Catilinam*, i., ii., iii., iv.; Latin prose composition. *Greek*—Homer, *Odyssey*, xi., xii.; Aeschylus, *Choeph.* and *Eumenides*; Thucydides, Bk. ii.; Greek prose composition.

5, 6. *Two Simson Bursaries*, of £25 each, tenable for four years, for Students entering on the second or third year of the course in Arts who are studying for the Ministry of the Church of Scotland. For conditions of tenure and subjects of Examination apply to the Rev. Dr Langwill, Currie, or to the Rev. John Patrick, Greenside, Edinburgh.

7 and 8. *Two Spence Bursaries*, each of the annual value of £30 for first year and £40 for second year of tenure, open to Students who have studied in the University of Edinburgh, at the commencement of their second session in a three years' curriculum, and of their third session in a curriculum of four years. Examination in Latin, Greek, Mathematics, and British History, to be held at St Andrews in October. Candidates apply to Messrs A. & H. Patullo, Writers, 11 Bank Street, Dundee, for particulars.

FOR STUDENTS ENTERING THE THIRD SESSION IN ARTS.

1. *Horsliehill Scott Bursary*, of £38, 8s. 8d. a-year (under deduction of Examiners' fees), for two years.

¹ See note 2, p. 77.

2. *Macpherson Bursary*, of £42, 18s. 6d. a-year, tenable for two years, restricted to Students who are natives of the Highlands and acquainted with Gaelic. Candidates must present evidence of Highland birth, and be examined orally in Gaelic on Friday, 14th October, at 1 P.M., as a preliminary to their names being placed on the list of Candidates.

The subjects of examination for *Third Session Bursaries* are Classics, Mathematics, and Logic with Psychology.

The following subjects are prescribed for the examination in Classics:— 1. Tacitus, *Annals*, Book xiv.; Lucretius, i.; 2. Thucydides, Book ii.; Aeschylus, *Eumenides*.

No special books prescribed for Mathematics, or for Logic with Psychology. Candidates should revise the lectures and text-books in these classes.

The Examinations for Second and Third Year Bursaries will take place as follows:—*Saturday, 15th October*—Latin, 9 A.M.; Greek, 1 P.M. *Monday, 17th October*—Mathematics, 9 A.M.; Logic and Psychology, 1 P.M.

N.B.—The names and addresses of Candidates for First, Second, and Third Session Bursaries must be announced at the "*Matriculation Office, University, Edinburgh*," not later than the 8th of October 1892, and those of Preferential Candidates not later than the 1st of October.

Candidates for the *'Three Sessions' Curriculum Examination*¹ in Latin and Greek, or for the *Entrance Examination* in Mathematics, are not required to give any intimation.

In the Competition for Bursaries, Students who matriculate and enter the Classes in the Curriculum of Arts for the first time in this or any Scottish University, and such only, are considered Students of the *first* session; and in like manner all and only Students who matriculate and enter the Classes of the Curriculum for the second and third time respectively, are considered Students in their *second* and *third* sessions respectively.

Town Council Bursaries.—Candidates for Bursaries in the gift of the Town Council, many of which are vacant early in October, are referred to the "*City Clerk, Council Chambers, Edinburgh*," to whom early application should be made.

County Club and Private Bursaries.—Candidates for Bursaries instituted by various County Clubs are referred to the respective Secretaries of those Clubs. Information as to Private Bursaries may be obtained from the Patrons or from their Agents.

¹ See note 2, p. 77.

The attention of all Bursars in the Faculty of Arts is particularly called to the following Regulation :—

“Bursars connected with the Faculty of Arts must annually attend, in the order required by the Dean, at least two of the Classes necessary for the Degree of Master of Arts, and must present themselves at the Departmental Examinations necessary for that Degree.

“Each Bursar must present a Certificate, signed by the Dean, attesting his regular attendance on the proper Classes in the Faculty of Arts, on each occasion on which he applies to the Factor for a payment.”

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Arts*, after the 11th November ; also at the end of the Session in April. In applying to the Dean for the Certificate in November, Bursars must present to him their Class Cards for the Session, as evidence that they have enrolled in their classes ; and at the end of the Session they must present to him certificates from the Professors that they have attended with regularity and made progress in their studies. Payments are made by the Factor for the University, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 18th May for the Whitsunday payments, and on and after 14th November for the Martinmas payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

G. CHRYSTAL, LL.D.,
*Dean of the Faculty of Arts, and
Professor of Mathematics.*

II.

FACULTY OF DIVINITY.

.....
1892-93.

Dean.

PROFESSOR MALCOLM CAMPBELL TAYLOR, D.D., &c.
6 Greenhill Park.

Programme of Classes.

—o—

FACULTY OF DIVINITY.

*Introductory Lecture by Professor Taylor, on Tuesday, 1st November,
at Twelve o'clock.*

Classes	Days of Opening, and Hours of Lectures.	Professors.	Class Fees.
Divinity	2 Nov., 12 o'cl.	Prof. Flint, ...	£3 3
Ecclesiastical History.	2 Nov., 11 ,,	Prof. Taylor, ...	3 3
Biblical Criticism.....	2 Nov., 10 ,,	Prof. Charteris, .	3 3
Hebrew—Junior Cl. .	2 Nov., 1 ,,	Prof. Adams, ...	3 3
Senior Cl. .	2 Nov., 2 ,,	.....	3 3
Arabic and Aramaic..	9 Nov., 3 ,,	.....	3 3
<i>(Mond., Wed., & Frid.)</i>			

THE SUMMER PREPARATORY CLASS IN ELEMENTARY HEBREW, conducted by the Class-Assistant under the superintendence of the Professor, opens on 2nd May, at 10 A.M. Fee—£1, 11s. 6d.

GIFFORD LECTURESHIP, for “promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term.” *Lecturer*—Professor OTTO PFLEIDERER, D.D., of Berlin University.

A double Course of twenty Lectures will be delivered during Session 1893-94.

Class-Assistant in Hebrew and } JOHN WILLIAM MURRAY.
Oriental Languages, . . . }

Examiners for Degree of B.D., { THOMAS A. BICKERTON, B.D.
WILLIAM HASTIE, B.D.

Curriculum

FOR THE

MINISTRY IN THE CHURCH OF SCOTLAND.

The Laws of the Church of Scotland require that every Theological Student, who desires to qualify himself for the Ministry, should attend the Class of *Divinity*, either during *three full and regular Sessions*, or during *two regular and three partial Sessions*;—and also that he should regularly attend during two Sessions each of the Classes of *Hebrew*, *Ecclesiastical History*, and *Biblical Criticism*.

Entrance Examinations.

(1.) Students, before enrolment *for the first year* of their curriculum with a view to the Ministry in the Church of Scotland, must produce to the Professor of Divinity Certificates of their having satisfactorily undergone an Examination in the subjects embraced in the *Curriculum of Arts*, and also in the Elements of Hebrew Grammar. By Act IX. of General Assembly 1872, it is ordained that this Examination shall be conducted at each of the four Scottish Universities, shortly before the commencement of every Session, by four Examining Committees, consisting of members elected by the adjoining Synods, with Conveners nominated by the General Assembly. *The Convener of the Committee for the University of Edinburgh is the Rev. John Alison, D.D., Minister of Newington.* The time of the Committee's meeting

and the prescribed subjects of Examination will be timeously advertised in the *Missionary Record* of the Church of Scotland.

(2.) Students, before enrolment at the beginning of *every Session after the first* of their course in Divinity, must produce certificates of their having satisfactorily undergone the Examinations prescribed by their respective Presbyteries. For subjects of Examination prescribed by the *Presbytery of Edinburgh*, see *Appendix to Calendar*.

Discourses.

Every Student of Divinity is required during his curriculum to deliver with approbation *six* Discourses upon subjects prescribed by the Professor of Divinity, viz., a Homily, a Latin Exegesis, a Lecture, a popular Sermon, a Hebrew Exercise on a passage of the Old Testament, and an Exercise with additions on a passage of the Greek New Testament.

The following Regulations have been made by the Faculty of Theology in regard to the delivery of these Discourses. (1.) Students of the *first* year shall give in their *Homily* to the Professor of Divinity not later than 1st February : (2.) Students of the *second* year shall give in their *Latin Exegesis* not later than the 24th December, and shall be prepared to deliver their *Lecture* not later than the 3d January ; (3.) Students of the *third* year shall give in their *Hebrew Exercise* and their *Greek Exercise* with additions, not later than the 24th December, and shall be prepared to deliver their *Popular Sermon* not later than the 2d of February.

Attendance at Foreign Universities.

The General Assembly of 1868, with the consent of a majority of Presbyteries, enacted and ordained :—(1.) That all candidates for the ministry shall attend during at least *two sessions* the Theological Classes at one or more of the Universities of Scotland, and shall deliver, with approbation, the Six Trial Discourses required by the Acts of the General Assembly ; and (2.) That any Student who wishes to prosecute the remainder of his Theological Curriculum at any Protestant University or

Universities not within the bounds of this Church, shall, before repairing thither, undergo satisfactory examination by the Presbytery with which he is connected, and shall, moreover, satisfy the same Presbytery in regard both to the Classes which he proposes to attend, and to the proficiency he has acquired in the language used in the Foreign University in which he intends to study.

Courses in the Faculty of Divinity.

I. DIVINITY.

PROFESSOR FLINT.

The course of study in this class extends over three Sessions. The Subjects of the Lectures during 1892-93 will be :—1. Providence. 2. Revelation and Scripture. 3. Redemption viewed in relation to the Character and Purpose of God. 4. The Person and Work of Christ. 5. The Atonement.

Lectures will be delivered on Mondays, Tuesdays, Wednesdays, and Thursdays at 12 o'clock. Fridays will be devoted partly to the hearing of Discourses and Exercises, and partly to Lectures.

The work of the class includes two written examinations and an essay.

II. HEBREW AND ORIENTAL LANGUAGES.

PROFESSOR ADAMS.

A.—HEBREW.

Junior Class—1 to 2.

Grammar and Exercises (Davidson's Hebrew Grammar).
Translations into Hebrew Prose.

Reading and Explanation of easy Prose and Poetical Passages in the Old Testament. During Session 1892-93 the Book of Ruth and selected Psalms will be read.

Oral and Written Examinations.

In connection with this Class there is a *Tutorial Class*, con-

ducted by the Class-Assistant, which meets at an hour found most convenient for the Students, on three days weekly during the Session, and which members of the Ordinary Class may attend without additional fee.

There is also a Preparatory Class in Elementary Hebrew, which meets during the SUMMER Session, and for which the fee is £1, 11s. 6d.

Senior Class—2 to 3.

Grammar (Davidson or Gesenius). Müller's Hebrew Syntax. Hebrew Prose Composition.

Reading and Explanation of portions of the Historical, Poetical, and Prophetic Books of the Old Testament. During Session 1892-93 Psalms, Book iii., and the Books of Joshua, Zephaniah, and Haggai, will be read critically.

Discussion of *Critical and Historical* Questions regarding the Text, Date, Authorship, and Contents of the Books read.

Occasional Lectures on the Hebrew Language and Literature may be given.

Oral and Written Examinations.

B.—ARABIC AND ARAMAIC.

This Class meets at *three o'clock* on Mondays, Wednesdays, and Fridays.

The work consists of—

Instruction in Arabic and Syriac Grammar; Readings from Arabic and Syriac Authors; Easy Translations into Arabic and Syriac; Oral and Written Exercises and Examinations.

It is intended that ARABIC should form the subject of study in this Class during Session 1892-93. A separate Class may also be formed for SYRIAC should a sufficient number of students present themselves.

Books recommended :—Socin's Arabic Grammar; Wright's or Forbes's Arabic Grammar; Jacob's Arabic Bible-Chrestomathy; Flügel's Edition of the Kor'an; Nestle's Syriac

Grammar, or Nöldeke's *Syrische Grammatik* ; Turpie's *Chaldee Manual* ; Rödiger's *Chrestomathia Syriaca* ; Syriac New Testament, with Gutbir's *Lexicon Syriacum* (Bagster & Sons).

For the Regulations of the Jeffrey Scholarship in Hebrew and Oriental Languages,—value about £80,—see in CALENDAR under "SCHOLARSHIPS IN DIVINITY."

For the Regulations of the Vans Dunlop Scholarship in "Hebrew and Oriental (Semitic) Languages,"—value about £100 annually for three years,—see in CALENDAR under "SCHOLARSHIPS IN ARTS" and "SCHOLARSHIPS IN DIVINITY."

The Vans Dunlop and Jeffrey Scholarships will both be competed for at the close of Session 1892-93.

III. ECCLESIASTICAL HISTORY.

PROFESSOR TAYLOR.

1. *Lectures*—Mondays and Tuesdays.—On The Beginnings of Christianity.

2. *Lectures*—Wednesdays and Thursdays.—On The History of the Church in Scotland from 1572.

3. *Text-Book*—Fridays.—Kurtz's "History of the Christian Church." First Division ; Second Section.

The work of the class includes three written examinations.

For the Regulations of the Vans Dunlop Scholarship in "History,"—value about £100 annually for three years,—see in CALENDAR under "SCHOLARSHIPS IN ARTS" and "SCHOLARSHIPS IN DIVINITY."

IV. BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

PROFESSOR CHARTERIS.

The whole course is arranged to occupy three sessions, in each of which a definite portion of work on the Old and New Testaments will be taken up. The work of each session is independent of the others, and can be studied separately. The first year's course is chiefly occupied with Introduction to the Penta-

teach ; and with Study of the Gnostic speculations relative to the Scriptures of the Old and New Testaments. The MSS. of the New Testament are also described as an introduction to Textual Criticism of the New Testament. *The second year's course is upon Introduction to the Poets and the Prophets of Israel ; upon the relation of the Christian Scriptures to the Old Testament ; with continuation of Introduction to Textual Criticism of the New Testament.* The third year's course is devoted to the Gospel of St John and questions of church order and Archæology, as suggested by the Pastoral Epistles. Critical Editions and disputed passages are studied as in Scrivener's "Introduction" during the second and third years' courses. Some portion of "Canonicity" is taken up each year, so as to study the early testimonies to the Christian Scriptures. If time permit, some work on Hebrew Antiquities is studied in the first year's course. There is also critical and exegetical reading of the Greek Testament each year.

The second year's course will be taken in 1892-93 (as above), with Canonicity, Parts i., ii., iv., v.

Text-Books.—"Canonicity," by the Professor ; Scrivener's Introduction to Textual Criticism.

There will be written and oral examinations, in which all regular students are required to take part ; and subjects of occasional voluntary essays will also be suggested.

Class Prize Lists.

WINTER SESSION, 1891-92.

I.—DIVINITY.

STUDENTS OF THE THIRD YEAR.

PRIZEMEN.—1. S. J. Ramsay Sibbald, M.A. ; 2. David A. Rollo, M.A. ; 3. John Muir, M.A. ; 4. J. R. Macdonald, M.A. ; 5. Norman Maclean, M.A. ; 6. James Thomson, M.A.
NEXT IN MERIT.—7. Wm. Searle, M.A. ; 8. Gordon C. Pringle, M.A. ; 9. James J. Trotter, M.A.

STUDENTS OF THE SECOND YEAR.

PRIZEMEN.—1. Adam W. Fergusson, M.A. ; 2. George Beale, M.A. ; 3. Ian R. Fraser, M.A. ; 4. Duncan Cameron, M.A. ; 5. John Muirhead, M.A. ; 6. James Wedderspoon, M.A.
NEXT IN MERIT.—7. David M. Kay, M.A. ; 8. John Hunter, M.A.

STUDENTS OF THE FIRST YEAR.

PRIZEMEN.—1. Henry Barker, M.A. ; 2. Arthur S. Morton ; 3. John Ritchie, M.A., and Hotchkin H. Murray, M.A.—equal.
NEXT IN MERIT.—5. James E. Mackay, M.A., John M'William, M.A., and Thomas Marjoribanks, M.A.—equal.

R. FLINT, D.D., *Professor.*

II.—HEBREW AND ORIENTAL LANGUAGES.

SUMMER SESSION, 1891.

ELEMENTARY HEBREW CLASS.

MEDAL.—Peter Campbell, Birmingham.

FIRST-CLASS CERTIFICATES OF MERIT.—1. Peter Campbell, Birmingham ; 2. William J. Pennell, Fifeshire ; 3. H. H. Murray, M.A., Brechin ; 4. David C. Stewart, M.A., Ochiltree.

SECOND-CLASS CERTIFICATES OF MERIT.—5. Arthur S. Morton, Trinidad ; 6. James E. Mackay, M.A., Caithness ; 7. James Petrie, Corstorphine.

WINTER SESSION, 1891-92.

HEBREW—JUNIOR CLASS.

MEDAL.—Peter Campbell, Birmingham.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Peter Campbell, Birmingham; 2. David C. Stewart, M.A., Ochiltree; 3. John Ritchie, M.A., Callander; 4. Thomas Marjoribanks, M.A., East Lothian, and H. H. Murray, M.A., Brechin—equal; 6. John Burr, M.A., Forfarshire.

FIRST-CLASS CERTIFICATES OF MERIT.—7. Robert Venters, M.A., Carlisle; 8. John M'William, M.A., Ayr; 9. James E. Mackay, M.A., Caithness.

SECOND-CLASS CERTIFICATES OF MERIT.—10. James K. Wilkin, M.A., Dumfriesshire; 11. Charles D. M'Intosh, Perthshire; 12. Albert E. Vert, Haddington; 13. James H. Pearson, Edinburgh; 14. John Ritchie, M.A., Edinburgh.

HEBREW—SENIOR CLASS.

MEDAL.—David M. Kay, M.A., B.Sc., Muthil.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. David M. Kay, M.A., B.Sc., Muthil; 2. John Hunter, M.A., Edinburgh; 3. William B. Stevenson, M.A., Forfar; 4. Adam W. Fergusson, M.A., Langholm; 5. James Wedderspoon, M.A., Invernessshire; 6. James A. Robertson, M.A., Kinclaven.

SECOND-CLASS CERTIFICATES OF MERIT.—7. John Muirhead, M.A., East Lothian; 8. John O. Stafford, M.A., Dumfries; 9. Robert S. V. Logie, M.A., Dirlerton; 10. Ian R. Fraser, M.A., Blair Athole; 11. Duncan Cameron, M.A., Inverness-shire, and Archibald J. Miller, M.A., Arbroath—equal.

SYRIAC CLASS.

HIGHLY COMMENDED.—Adam W. Fergusson, M.A., Langholm; James O. F. Gracie, M.A., Tannadice; William Meston, M.A., Aberdeen; J. Iverach Munro, M.A., Caithness; William B. Stevenson, M.A., Forfar; Rev. Charles H. Titterton, M.A., Warwickshire; James Wedderspoon, M.A., Inverness-shire.

DAVID L. ADAMS, D.D., *Professor.*

III.—ECCLESIASTICAL HISTORY.

PRIZEMEN.—1. John Kennedy, M.A., Newport, Fife (*Medallist*); 2. David A. Rollo, M.A., Perth; 3. Martin B. M'Innes, M.A., Caithness; 4. Norman Maclean, M.A., Portree; 5. John Craig, M.A., Bonnyrigg; 6. David Miller Kay, M.A., B. Sc., Muthil, and Gordon C. Pringle, Aberdeenshire—equal.

248 *Regulations for the Degree of Bachelor of Divinity.*

HONOURABLE MENTION.—William Serle, M.A., East Lothian; John Burr, M.A.,¹ Forfarshire; John Muir, M.A., Liberton, Lanarkshire.

M. C. TAYLOR, D.D., *Professor.*

IV.—BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

PRIZEMEN.—1. S. J. Ramsay Sibbald, M.A. (*Medallist*); John Craig, M.A., and James Thomson, M.A.—equal; 4. David Miller Kay, M.A., and David Andrew Rollo, M.A.—equal; 6. William Serle, M.A.; 7. James R. Macdonald, M.A., and Gordon C. Pringle, M.A.—equal; 9. Duncan Cameron, M.A.; Adam W. Fergusson, M.A.; John Kennedy, M.A., and W. B. Stevenson, M.A.—equal.

HONOURABLE MENTION.—J. Lawrie Symington, M.A.; John Muir, M.A.; John Muirhead, M.A.

ESSAYS.—1. Adam W. Fergusson, M.A., and S. J. Ramsay Sibbald, M.A.—equal; 3. George Beale, M.A.; Ian Roderick Fraser, M.A.; David A. Rollo, M.A., and W. B. Stevenson, M.A.—equal.

A. H. CHARTERIS, D.D., *Professor.*

Regulations

FOR THE DEGREE OF BACHELOR OF DIVINITY.

APPROVED OF BY THE CHANCELLOR OF THE UNIVERSITY
17th OCTOBER 1870, and 17th April 1872.

I. No one shall be admitted as a Candidate for the Degree of Bachelor of Divinity unless he be a Graduate in Arts of one of the Universities of Scotland, or of England, or of Ireland, or of a Colonial University, whose degrees shall, for this purpose, have been specially recognised by the University Court.

II. This Degree shall be conferred only after the Candidate has completed his Theological Curriculum with a view to the ministry in the Church or Denomination to which he belongs, and after he has passed a satisfactory examination in the various branches of Theology which are taught in this University.

III. Candidates who are not Masters of Arts of the University of Edinburgh must have attended two classes in one or more of the Faculties of this University.

IV. The subjects of examination for the Degree of Bachelor of Divinity shall be arranged in two departments:—The First Department embracing—(1) Hebrew, and (2) Apologetic Theology, or the Evidences of Natural and Revealed Religion; and the Second Department embracing—(1) Ecclesiastical History, (2) Systematic Theology, and (3) Biblical Criticism and Biblical Antiquities.

V. Candidates who have completed their Theological Course may be examined in either of these departments, and may defer to some future occasion their examination in the other department, provided always that there be not a greater interval than two years between their two examinations.

VI. Students who have completed all the Sessions but one of their Theological Course may be admitted to examination in the first department.

VII. The examinations shall be conducted by the Professors of the Theological Faculty with the assistance of two Examiners, being Bachelors of Divinity of one of the Universities of Scotland, to be nominated by the University Court.

VIII. The Examination in the First Department shall take place at, or soon after, the commencement of the Theological Session; and the Examination in the Second Department at, or soon after, the close of the Theological Session—power being reserved to the Senatus Academicus, should they see cause, to appoint the examination in both departments to take place at either of these periods.

IX. The Fee for examination shall be Three Guineas, payable in advance; but when the examination is undergone on different occasions, a Fee of two Guineas shall be paid prior to the first, and the remaining One Guinea prior to the last examination.¹

There will be an examination in both departments on Tuesday, 25th October 1892, and two following days; and also on Wednesday, 22nd March 1893, and two following days. (25th October and 22nd March), Hebrew, 10 A.M., and Apologetics, 2 P.M.; (26th October and 23rd March), Ecclesiastical History, 10 A.M., and Divinity, 2 P.M.; (27th October and 24th March), Biblical Criticism, 10 A.M.,—three hours being allowed for each Subject. Candidates are required to communicate their names, together with evidence of their being qualified in terms of the above Regulations, to the Dean of the Faculty of Divinity, at least one week before the day appointed for the Examination, and to pay the fees² at the Matriculation Office on or before 19th October 1892, and on or before 15th March 1893, for the Examinations in October and March respectively.

¹ Every Candidate must matriculate before Examination or Graduation. He is also required before Graduation to pay the Fee of £1 for Registration as a member of the General Council, which is compulsory by Act of Parliament.

² When names are not entered, and fees paid, on or before the stated dates, a late-entry fee of ten shillings must be paid before the candidate can be admitted to examination. A candidate is not held to be entered for the examination until his name is entered, the fee paid, and all the necessary certificates, &c., lodged.

The subjects of examination are as follows :—

DEPARTMENT I.

I. *Hebrew*—

- (1.) Questions in Grammar.
- (2.) Translation into Hebrew Prose.
- (3.) Book of Joshua.
- (4.) Psalms, Book iii.
- (5.) Zephaniah and Haggai.

Some critical knowledge of the text of the books prescribed is required.

II. *Apologetic Theology*—

- (1.) Theism and Pantheism.
- (2.) The Character and Teaching of Christ as testifying to the truth of Christianity.
- (3.) The Christian Evidences as connected and cumulative.

DEPARTMENT II.

I. *Ecclesiastical History*—

- (1.) The Main Facts in the Development of the Constitution, Doctrine, and Worship of the Church to 381 A.D. (2.) The History of the Church in Scotland during the 17th Century.

II. *Systematic Theology*—

- (1.) The History of Christian Dogmatics from the Reformation to the close of the XVIIIth Century.
- (2.) The Doctrine of Holy Scripture.
- (3.) The Doctrines of Predestination, Creation, and Providence.

III. *Biblical Criticism and Biblical Antiquities*—

Manuscripts, Versions, and Disputed Passages of the New Testament. (As in "Scrivener's Introduction," Third Edition.)

Old Testament Introduction, Pentateuch, and the Prophets.

The Origin of the New Testament Canon, especially of the Gospels. Canonicity, pp. 1-23 ; 53-75.

Examination Papers.

DEPARTMENT I.

I.—HEBREW.

Tuesday, Oct. 27, 1891.—10 to 1 o'clock.

I. Translate into Hebrew :—

After the people had entered the land of which their leaders had told them, they soon got very much corrupted, and were no longer able to fight in anything like the way they fought at first. They made treaties with the nations round about, though God had said concerning these, Let there not be left so much as one ; they planted vineyards, dug wine-presses, gathered the vintage, rejoiced in the fatness of the land, and ceased to obey the commands of God, though these were wise and the people knew them. When God saw what they were doing he was angry ; and being the ruler of the whole earth, he stirred up enemies to lay waste their land. Still God did not break his covenant with them, but on every occasion when they turned to seek him, he mercifully delivered them from those who plundered them. In those days the people had no king, but God ruled invisibly, for he it was who inspired their judges with wisdom.

II. (a) Point :—

וַיֵּאסְפוּ כָל בְּעָלֵי שָׂכָם וְכָל בֵּית מְלֹא וַיִּלְכוּ וַיְמַלִּיכוּ אֶת אֲבִימֶלֶךְ לְמֶלֶךְ 1
 2 עִם אֱלֹן מִצֵּב אֲשֶׁר בְּשָׂכָם : וַיִּגִּדּוּ לְיוֹתָם וַיֵּלֶךְ וַיַּעֲמֵד בְּרֹאשׁ הָר גְּרִזִּים
 וַיֵּשֶׁא קוֹלוֹ וַיִּקְרָא וַיֹּאמֶר לָהֶם שָׁמְעוּ אֵלַי בְּעָלֵי שָׂכָם וַיִּשְׁמַע אֱלֹהִים :
 3, 4 הַלֹּךְ הַלְכוּ הָעֲצִים לְמִשָּׁח עֲלֵיהֶם מֶלֶךְ וַיֹּאמְרוּ לְזוֹת מְלוּכָה עָלֵינוּ : וַיֹּאמֶר
 לָהֶם הַזֹּאת הַחֲדַלְתִּי אֶת דְּשָׁנִי אֲשֶׁר בִּי יִכְבְּדוּ אֱלֹהִים וְאֲנִשִּׁים וְהִלַּכְתִּי לְנֹעַ
 עַל הָעֲצִים :

(b) Translate.

(c) Jerome renders אֱלֹן מִצֵּב by *quercus quae stabat in Sichem*.
 Is this correct ?

Explain these other renderings, (a) *quercus stationis quae est in S.*, and (b) *quercus monumenti quae est in S.*

(d) Remark on the Massoretic pointing of הַחֲדָלְתִּי. Some MSS. read הַחֲדָלְתִּי; remark on this. Explain the syntax of וְהִלַּכְתִּי.

(e) Point, parse, and remark on מְלוֹכָה. Give the Massoretic correction of this form.

III. (a) Translate :—

1 (a) וַיֹּאמֶר אֵלֶיהָ הַשְׁקִינִי-נָא מַעַט-מַיִם בִּי צִמְתִּי וּתְפַתַּח אֶת-נְאוֹד הַחֶלֶב
2 וְתִשְׁקָהוּ וְתִכְפֶּהוּ: וַיֹּאמֶר אֵלֶיהָ עֲמֹד פֶּתַח הָאֵהָל וְהִיא אִם-אִישׁ יָבֹא
3 וְשָׁאַלְךָ וְאָמַר הִישְׁפֹּה אִישׁ וְאָמַרְתְּ אֵין: וְתִקַּח יָעֵל אִשְׁתְּ-חֶבֶר אֶת-יְתֵד
הָאֵהָל וְתִשֹּׁם אֶת-הַפִּקֹּבֶת בַּיָּדָה וְתִבּוֹא אֵלָיו בְּלֹאט וְתִתְקַע אֶת-הַיְתֵד
בְּרִקְתּוֹ וְתִצְנַח בָּאָרֶץ וְהוּא-נִרְדָּם וַיַּעַף וַיָּמָת:

1 (β) אֲזָרוּ מִרְזוֹ אָמַר מְלֹאךְ יְהוָה אָרוּ אֲרוֹר יִשְׁבִּיָּה בִּי
2 לֹא-בָאָה לַעֲזֹרַת יְהוָה לַעֲזֹרַת יְהוָה בְּגִבּוֹרִים: תִּבְרַךְ מְנַשִּׁים
3 יָעֵל אִשְׁתְּ חֶבֶר הַקִּינִי מְנַשִּׁים בָּאֵהָל תִּבְרַךְ: מַיִם
4 שָׁאַל חֶלֶב נָתַן בְּסֶפֶל אֲדִירִים הִקְרִיבָה חֲמָאָה: יָדָה
לִיְתֵד תִּשְׁלַחנָה וַיִּמְינָה לְהִלְמוֹת עַמִּלִּים וְהִלְמָה סִיסְרָא
5 מִחֻקָּה רֹאשׁוֹ וּמִחֻצָּה וְחִלְפָה רִקְתּוֹ: בֵּין רִגְלֶיהָ פָּרַע נָפַל
שָׁכַב בֵּין רִגְלֶיהָ פָּרַע נָפַל בְּאִשֶּׁר פָּרַע שָׁם נָפַל שְׂדוֹד:

(b) Parse and remark on שָׁאַלְךָ, עֲמֹד, צִמְתִּי.

(c) (a) What is the subject of וְתִצְנַח? In what other connection and meaning has the word occurred in your work?

(β) What is the distinction between וַיַּעַף and וַיָּמָת? Parse both words.

(γ) What is peculiar in the form בְּלֹאט? Mention any similar cases? How would you explain them?

- (d) What is peculiar about תְּשַׁלְּחֶנָּה, and what explanations have been offered?
- (e) Would it make any difference in the meaning if, instead of סִפְּלֵי אֲדִירִים, were read אֲדִיר סִפְּלֵי?
- (f) Is there any difference between these two narratives in the statement of facts?

IV. (a) Translate:—

1, 2 שִׁיר הַמַּעֲלוֹת אֶל־יְהוָה בַּצֵּרֶתָהּ לִי קִרְאתִי וַיַּעֲנֵנִי: יְהוָה הֻצִּילָה
 3 נַפְשִׁי מִשִּׁפְּתֵי־שָׁקֶר מִלִּשׁוֹן רַמְיָה: מִה־יָּתֵן לִי וּמִה־יִּסְּרֵה לִי לִשׁוֹן
 4, 5 רַמְיָה: חֲצִי גִבּוֹר שְׁנוּנִים עִם גַּחֲלֵי רִתְמוֹת: אֹיֵה לִי בִּיגְרָתִי מִשִּׁפְּ
 6, 7 שְׁכַנְתִּי עִם־אֲהָלֵי קֹדֶר: רַבַּת שְׁכֵנָה־לָּהּ נַפְשִׁי עִם שְׁוֹנָא שְׁלוֹם: אֲנִי־שְׁלוֹם
 וְכִי אֲדַבֵּר הָמָּה לַמַּלְחָמָה:

- (b) Remark on the grammatical form and meaning of שִׁיר הַמַּעֲלוֹת
- (c) Remark on לִי בַּצֵּרֶתָהּ, and express the idea in as many forms as you can.
- (d) Have you anything to note as to אֹיֵה, לִשׁוֹן רַמְיָה, and שְׁכֵנָה־לָּהּ?
- (e) (a) How comes it that there are several translations of verse 3?
 (β) Give as many of these as you know.
- (f) How has verse 4 been emended so as to be independent of verse 3 and form an introduction to verse 5?
- (g) Write the full phrases of which אֲנִי שְׁלוֹם and וְכִי אֲדַבֵּר are contractions.
- (h) State Ewald's rendering of verse 7 and the objections to it.

V. (a) Translate:—

- 1 תִּקְעוּ שׁוֹפָר בְּצִיּוֹן וְהִרְעִיז בְּהָר קְדִישִׁי יִרְגָּזוּ כָּל יֹשְׁבֵי הָאָרֶץ כִּי־בָא
 2 יוֹם־יְהוָה בִּי קְרוֹב: יוֹם חֹשֶׁךְ וָאִפְלָה יוֹם עָנָן וְעֶרְפֶּל כְּשַׁחַר פֶּרֶשׁ עַל־הַהָרִים
 3 עִם רֶב וְעִצּוֹם כָּמֹהוּ לֹא נִהְיָה מִן־הָעוֹלָם וְאַחֲרָיו לֹא יוֹסֵף עַד־שְׁנֵי דוֹר
 4 וְדוֹר: לִפְנֵי אֲכָלָה אִשׁ וְאַחֲרָיו תִּלְחַט לְהִבָּה בְּנוֹ־עֶדֶן הָאָרֶץ לִפְנֵי וְאַחֲרָיו
 5 מִדְּבַר שְׁמֵמָה וְגַם־פְּלִיטָה לֹא־הִיְתָה לוֹ: כִּמְרֹאֶה סוֹסִים מְרֹאֶה וּבִכְפָּרִשִׁים
 6 7 קֵץ בָּעַם עֲצוֹם עֲרוֹךְ מִלְחָמָה: מִפְּנֵי יִחִילוּ עַמִּים כָּל־פָּנִים קָבְצוּ פֶּאֶרֶז:
 8 בְּגִבּוֹרִים יִרְצוּן בְּאֲנֵשׁ מִלְחָמָה יַעֲלֶה חוֹמָה וְאִישׁ בְּדַרְכֵּי יִלְכּוּן וְלֹא יַעֲבֹטוּ
 9 אֲרָחוֹת: וְאִישׁ אֲחִיו לֹא יִדְחִקוּן גִּבֹּר בְּמִסְלָתוֹ יִלְכּוּן וּבְעֵד הַשְּׁלַח יַפְלֹוּ לֹא
 10 יִבְצְעוּ: בְּעִיר יִשְׁקוּ בַּחוֹמָה יִרְצוּן בְּבָתִּים יַעֲלֶה בְּעַד הַחֲלוֹנִים יָבֹאוּ בְּנֶגֶב:
 11 12 לִפְנֵי רִגְזָה אֶרֶץ רַעֲשׂוּ שָׁמַיִם שָׁמֹשׁ וִירַח קָדְרוּ וְכוֹכָבִים אֲסָפוּ נִגְהָם:
 13 וַיִּקְנֹא יְהוָה לְאַרְצוֹ וַיַּחְמֹל עַל־עַמּוֹ: וַיַּעַן יְהוָה וַיֹּאמֶר לַעֲפֹז הִנְנִי שֹׁלַח לָכֶם
 14 אֶת־הַדָּגָן וְהַתִּירֹשׁ וְהַיִּצְהָר וּשְׁבַעְתֶּם אֹתוֹ וְלֹא־אֶתֶּן אֶתְכֶם עוֹד חֲרָפָה
 15 בְּנוֹי: וְאֶת־הַצֹּפְנִי אֲרָחִיק מֵעֲלֵיכֶם וְהִדְחִיתִי אֶל־אֶרֶץ צִיָּה וּשְׁמֵמָה
 16 אֶת־פְּנֵי אֱלֹהִים הַקְדַּמְנִי וְסָפוּ אֱלֹהִים הָאֲחֵרִין וְעֵלָה בְּאִשׁוֹ וְתַעַל צַחַנְתּוֹ
 17 בִּי הַנִּדְּיָל לַעֲשׂוֹת: אֶל־תִּירָאִי אֲדַמָּה גִּילִי וּשְׁמַחִי בִּי הַנִּדְּיָל יְהוָה לַעֲשׂוֹת:
 18 אֶל־תִּירָאוּ בַּחֲמוֹת שְׂדֵי כִי דִשְׂאוּ נְאוֹת מִדְּבַר כִּי־עֵץ נִשְׂא פִּרְיָה תֵּאֵנָה וּגְפֵן
 19 נִתְּנָה חֵילָם: וּבְנֵי צִיּוֹן גִּילוּ וּשְׁמָחוּ בִּיהוָה אֱלֹהֵיכֶם כִּי־נָתַן לָכֶם אֶת־הַפְּזִירָה
 20 לְצַדִּיקָה וַיִּזְרַד לָכֶם נֶשֶׁם מוֹרָה וּמִלְקוֹשׁ בְּרָאִשׁוֹ:

(b) (a) Give another construction of תִּקְעוּ שׁוֹפָר.

(β) What are the possible subjects of קְרוֹב?

- (c) Why cannot פָּרֵשׁ be the predicate of עם? What is its predicate?
- (d) Write short notes on עֵבֶט, יְרוּצֹן, יִרְקָדוֹן, לְהִבָּה, יוֹסֵף
- (e) What is peculiar about עֶרְוָה? Account for it.
- (f) (a) What is the literal meaning of כָּבְצוּ פָּאֲרוֹר?
 (β) What two divergent meanings have been derived from this? (γ) Note a similar phrase in this passage.
- (g) Mention different meanings offered for בְּעֵד הַשֶּׁלַח יַפְלוּ; also for לֹא יִבְצְעוּ.
- (h) Remark on נָשָׂא פְּרִיו, שָׂרִי, תִּירָאוּ בְּהִמּוֹת, צִחְנָה, וְתַעַל, הַצְפּוֹנִי.
- (i) Give various renderings of הַמּוֹרָה לְצִדְקָה.
- (j) What is the Hebrew corresponding to the Septuagint rendering of the last word in v. 16—καθὼς ἐμυρροσθεν?

VI. (a) Translate:—

- 1 נִשְׁבַּע אֲדֹנִי יְהוָה בְּנַפְשׁוֹ נֹאם־יְהוָה אֱלֹהֵי צְבָאוֹת מִתְאֵב אֲנִכִּי אֶת־נָאֹו
- 2 יַעֲקֹב וְאַרְמְנָתִיו שְׁנֵאֲתִי וְחִסְגִּרְתִּי עִיר וּמְלָאָהּ: וְהָיָה אִם־יִוָּתְרוּ עֲשָׂרָה
- 3 אֲנָשִׁים בְּבֵית אֶחָד וּמָתוּ: וְנִשְׂאוּ דֹדָו וּמִסְרָפּוֹ לְהוֹצִיא עֲצָמִים מִן־הַבֵּית
- וְאָמַר לְאִשֶּׁר בִּירְכָתִי הַבֵּית הָעוֹד עִמָּךְ וְאָמַר אַפֶּס וְאָמַר הֵם בִּי לֹא
- לְהוֹפִיר בְּשֵׁם יְהוָה:
- 4 כִּי־הִנֵּה יְהוָה מַצִּיחַ וְהִבֵּה חַבִּית הַגָּדוֹל רְסִיסִים וְהַבֵּית הַקָּטָן בַּקָּעִים:
- 5 הִירָצוֹן בַּסֵּלַע סוֹסִים אִם־יִתְרוֹשׁ בְּבִקְרִים כִּי־הִפְכֶתֶם לְרֹאשׁ מִשְׁפָּט וּפְרִי
- 6 צִדְקָה לְלַעֲנָה: הַשְׂמִיחִים לֹא דִבֶּר הָאֲמָרִים הָלֹא בַחֲזָקָנוּ לִקְחָנוּ לָנוּ
- 7 קִרְנִים: כִּי הִנֵּי מָקִים עֲלֵיכֶם בֵּית יִשְׂרָאֵל נֹאם־יְהוָה אֱלֹהֵי הַצְבָּאוֹת הוֹי
- וּלְחַצּוֹ אֶתְכֶם מִלְּבָאֵי חֶמֶת עַד־נַחַל הָעֶרְבָה:

- (b) Remark on מְתָאֵב, מְסָרָה, רְסִיסִים, הֵם, and on the suffixes to the first three words of verse 3.
- (c) Explain the grammatical connection of מְסָרְפֵּן, and tell what Jerome's rendering, "*et comburet eum*" corresponds to.
- (d) (a) What meanings attach to constructions of the form לֹא לְהַזְכִּיר? Give another instance of such a construction from your reading.
- (β) Remark on the combination לֹא דָבָר, and give another example of it.
- (e) Explain the syntax of וְהִסְנֶרְתִּי (v. 1), וּמָתוֹ (v. 2), וְהָבָה הַבַּיִת (v. 3), וְהָבָה הַבַּיִת (v. 4), and וְלִחְצֹו (v. 7).
- (f) What objections are there to the Massoretic text אִם יִהְיֶה אֵם יִהְיֶה? How may it be emended and translated?
- (g) What idiom is exemplified in יִהְיֶה? Give other examples of the idiom.

Wednesday, March 23, 1892.—10 to 1 o'clock.

I. Translate into Hebrew :—

In our city there were two poor men, one of whom acted uprightly, while the other did continually what was infamous. The life of the wicked man nevertheless prospered, and he got money, and lands, and houses, and servants, each of whom called him lord. As for the upright man, men were sorry for him, for he was in entire want. The wicked man also became judge, and said to himself, What one is there of the men of this city, the poor man excepted, who does not fear me? He too shall do me homage. So he began to oppress that poor man. When the people saw how their ruler became ever more wicked in his actions, they said among themselves, We must consult the oracle that we may know what we are to do with this man. The oracle answered, You must assemble as one man, and take an oath not to eat or drink until ye have driven him forth. In this manner they acted, and they invested the poor man with the office of judge in his stead.

II. Point and translate:—

- 1 וכל איש ישראל כמו ממקומו ויערכו בבעל תמר וארב ישראל מגוח
 2 ממקומו ממערה גבע: ויראו בני בנימן כי נגפו ויתנו איש ישראל מקום
 3 לבנימן כי בטחו אל הארב אשר שמו על הגבעה: והארב החישו ויפשטו
 4 אל הגבעה וימשך הארב ויך את כל העיר לפי חרב: והמועד היה לאיש
 ישראל עם הארב הרב להעלותם משאת העשן מן העיר:

Remark on מַמְעָרָה גִּבְעָה (v. 1.); parse מִשְׁאֵת (v. 4); and parse
 and remark on הָרֵב (v. 4).

III. Translate:—

- 1 וַתֹּאמֶר דָּלִיָּה אֶל-שְׁמִשׁוֹן עַד-הֵנָּה הִתְלַת בִּי וַתִּדְבֹּר אֵלַי בְּזָבִים הַגִּידָה
 לִי בַּמָּה תֵּאסֵר וַיֹּאמֶר אֵלֶיהָ אִם-תֹּאדָּרְנִי אֶת-שִׁבְעַת מַחְלָפוֹת רֹאשִׁי
 2 עַם-הַפְּסֻכָּת: וַתִּתְּקַע בַּיָּתָד וַתֹּאמֶר אֵלָיו פְּלִשְׁתִּים עָלֶיךָ שְׁמִשׁוֹן וַיִּקֵּן
 3 מִשְׁנָתוֹ וַיִּסַּע אֶת-הַיָּתֵד הָאָדָם וְאֶת-הַפְּסֻכָּת: וַתֹּאמֶר אֵלָיו אֵיךְ תֵּאמֹר
 אֶהְבֵּתִיךָ וּלְבָבְךָ אֵין אֵתִי זֶה שְׁלֹשׁ פַּעַמִּים הִתְלַת בִּי וְלֹא-הִנֵּדְתָּ לִּי בַּמָּה בָּחֶךְ
 4 גָּדוֹל: וַיְהִי כִּי-הִצִּיקָהּ לֹךְ בְּדַבְרֶיהָ בְּלִהְיִמִּים וַתֹּאמֶר וַתִּקְצֹר נַפְשׁוֹ לָמוֹת:
 5 וַיַּגִּד-לָהּ אֶת-כָּל-לִבּוֹ וַיֹּאמֶר לָהּ מִזֶּה לֹא-עָלָה עַל-רֹאשִׁי כִּי-נִזְוִיר אֱלֹהִים
 אֲנִי מִבְּטָן אִמִּי אִם-נִלְחַמְתִּי וְסָר מִמֶּנִּי כָחִי וְחַלְתִּי וְהָיִיתִי כְּכֹל-הָאָדָם:
 6 וַתֹּרֶא דָּלִיָּה כִּי-הִגִּיד לָהּ אֶת-כָּל-לִבּוֹ וַתִּשְׁלַח וַתִּקְרָא לְסָרְנִי פְּלִשְׁתִּים לֵאמֹר
 עָלֶיךָ הַפַּעַם כִּי-הִגִּיד לָהּ אֶת-כָּל-לִבּוֹ וְעָלָה אֵלֶיהָ סָרְנִי פְּלִשְׁתִּים וַיַּעֲלֶה הַפֶּסֶף
 7 בִּידָם: וַתִּשְׁנֶה וַתִּשְׁנֶה וַתִּקְרָא לֵאשִׁשׁ וַתִּגְלַח אֶת-שִׁבְעַת מַחְלָפוֹת רֹאשִׁו
 8 וַתַּחַל לְעַנּוֹתוֹ וַיִּסָּר כָּחוֹ מֵעָלָיו: וַתֹּאמֶר פְּלִשְׁתִּים עָלֶיךָ שְׁמִשׁוֹן וַיִּקֵּן
 מִשְׁנָתוֹ וַיֹּאמֶר אֵצֶא בַּפַּעַם בַּפַּעַם וְאֶנְעֹר וְהוּא לֹא יָדַע כִּי יִהְיֶה סָר
 9 מֵעָלָיו: וַיֹּאחֲזֶהוּ פְּלִשְׁתִּים וַיִּנְקְרוּ אֶת-עֵינָיו וַיִּזְרִדוּ אוֹתוֹ עֲזָתָה וַיֹּאסְרוּהוּ
 10 בְּחִטְשִׁתִּים וַיְהִי טוֹחוֹן בְּבֵית הָאֲסִירִים: וַיַּחַל שְׁעַר-רֹאשׁוֹ לְצִמּוֹת פֶּאֶשֶׁר
 גָּלַח:

- (a) Remark on מַחֲלָפוֹת and מַסְכֶּת (v. 1); זֶה and בְּחֶךְ גְּדוֹל (v. 3); מוֹרָה (v. 5); סִרְיִי (v. 6); and שַׁעַר (v. 10).
- (b) Parse and remark on הַתְּלָת (v. 1), and וַיִּיקִין (v. 2).
- (c) Write the K'thîbh and the Q'rê in vv. 6 and 9.
- (d) The following is the Septuagint version of part of the first two verses :—

Καὶ εἶπε πρὸς αὐτήν, ἐὰν ὑφάνῃς τὰς ἐπτὰ σειρὰς τῆς κεφαλῆς μου σὺν τῷ διάσματι, καὶ ἐγκρούσῃς τῷ πασσάλῳ εἰς τὸν τοῖχον, καὶ ἔσομαι ὡς εἷς τῶν ἀνθρώπων ἀσθενής. Καὶ ἐγένετο ἐν τῷ κοιμᾶσθαι αὐτὸν, καὶ ἔλαβε Δαλιδὰ τὰς ἐπτὰ σειρὰς τῆς κεφαλῆς αὐτοῦ, καὶ ὑφανεन ἐν τῷ διάσματι, καὶ ἔπηξε τῷ πασσάλῳ εἰς τὸν τοῖχον, καὶ εἶπεν, ἀλλόφυλοι ἐπὶ σέ Σαμψών· καὶ ἐξυπνίσθη ἀπὸ τοῦ ὕπνου αὐτοῦ, καὶ ἐξῆρε τὸν πάσσαλον τοῦ ὑφάσματος ἐκ τοῦ τοῖχου.

Point out, and remark on, the differences between this and the Massoretic text.

IV. Translate :—

- שִׁיר הַמַּעֲלֹת, רַבַּת צָרְרֹנִי מִנְעֹרִי יֹאמַרְנָא יִשְׂרָאֵל : רַבַּת
 3 צָרְרֹנִי מִנְעֹרִי גַם לֹא-יִכְלוּ לִי : עַל-גַּבִּי הָרִשׁוֹ חֲרָשִׁים הָאֲרִיכוּ לְמַעְנוֹתָם :
 4,5,6 יְהוָה צִדִּיק קִצֵּץ עֲבֹת רָשָׁעִים : יִבְשׁוּ וַיִּפְּגוּ אַחֲזָר כָּל שְׁנֵאֵי צִיּוֹן : יִהְיֶה
 7 בַּחֲצִיר גִּנּוֹת שְׁקִדְמַת יִטְלֶף יִבְשׁ : שְׁלֵא מִלָּא כִפּוֹ קוֹצֵר וַחֲצִצְוֹ מַעְפֹּר :
 8 וְלֹא אָמְרוּ הַעֲבָרִים בְּרַבַּת-יְהוָה אֲלֵיכֶם בְּרַכְנוּ אֶתְכֶם בְּשֵׁם יְהוָה :

- (a) Write a short note on the grammatical form and the meaning of the title שִׁיר הַמַּעֲלֹת.
- (b) Remark on the construction הָאֲרִיכוּ לְמַעְנוֹתָם (v. 3), and on the form מַעְנוֹתָם. Write the Q'rê.
- (c) Point out יִכְל and give its imperfect; also the imperfect of צָרַר

- (d) Explain the construction קָדַמְתָּ שָׁלָה (v. 6). What renderings have been given of the phrase? How might the verb be otherwise pointed?
- (e) Explain the syntax of v. 7.
- (f) Have you any remark to make on v. 8?

V. (1) Translate:—

1, 2 הָסֵר מֵעָלַי הַמֶּזֶן שֶׁרִיד וְזִמְרָת נְבִלִיד לֹא אֶשְׁמַע: וַיִּגַּל בְּפָנַי מִשְׁפָּט
 3 וַיִּצְדָּקָה בְּנַחַל אֵיתָן: הַזִּבְחִים וּמִנְחָה הַנִּשְׁתָּם-לִי בַּמִּדְבָּר אַרְבָּעִים שָׁנָה
 4 בֵּית יִשְׂרָאֵל: וַנִּשְׁאַתֶּם אֶת סִבּוֹת מַלְכֵכֶם וְאֶת בָּיוֹן צִלְמִיכֶם בּוֹכֵב
 5 אֱלֹהֵיכֶם אִשָּׁר עָשִׂיתֶם לָכֶם: וְהַגַּלְתִּי אֶתְכֶם מִהַלְאָה לְדַמְיוֹשֶׁק אֲמֹר
 יְהוָה אֱלֹהֵי-צִבְאוֹת שְׁמוֹ:

- (a) Parse יִגַּל, and give the derivation of אֵיתָן (v. 2).
- (b) Write a short note on סִבּוֹת and בָּיוֹן (v. 4).
- (c) Add any other critical remarks on this verse, noticing the Septuagint version:—

*Kal ἀνέλάβετε τὴν σκηνὴν τοῦ Μολὸχ,
 καὶ τὸ ἄστρον τοῦ θεοῦ ὕμῶν 'Ραιφάν,
 τοὺς τύπους αὐτῶν οὓς ἐποιήσατε ἑαυτοῖς.*

(2) Translate:—

1 הָעַל וְאֶת לֹא-תִרְגֹּז הָאָרֶץ וְאֲבָל כָּל-יֹשֵׁב בָּהּ וְעַלְתָּה כְּאֹר כְּלָהּ וְנִגְרַשָּׁה
 2 וְנִשְׁקָה בִּיאֹר מִצָּרִים: וְהִיָּה בַיּוֹם הַהוּא נָאֻם אֲדֹנִי יְהוָה וְהִבְאֵתִי
 3 הַשְׁמָשׁ בַּצְּהָרִים וְהַחֲשִׁכְתִּי לָאָרֶץ בַּיּוֹם אֹר: וְהַפַּכְתִּי חַיִּיכֶם לְאֲבָל
 4 וְכָל-שִׁירֵיכֶם לְקִינָה וְהִעֲלִיתִי עַל-כָּל-מִתְנִים שָׂק וְעַל-כָּל-רֹאשׁ קָרְחָה
 וְשִׁמְתִּיהָ בְּאֲבָל יָחִיד וְאַחֲרִיתָהּ בַּיּוֹם מָר: בַּיּוֹם הַהוּא תִתְעַלֶּפְנָה

5 הַבְּתוּלוֹת הַיְּפֹת וְהַבְּחֹרִים בַּעֲמָא : הַנְּשָׁבָעִים בְּאַשְׁמַת שְׁמֶרֶן וְאָמְרוּ
חִי אֱלֹהֶיךָ דָּן וְחִי דָּרְךָ בְּאַרְשָׁבַע וּנְפֹלוּ וְלֹא־יָקוּמוּ עוֹד :

(a) Remark on כָּאֵר and נִשְׁקָה (v. 1), giving the Q'rê ; צִהָרִים (v. 2) ; שֶׁק (v. 3) ; בְּחֹרִים (v. 4) ; and חִי דָּרְךָ בְּאַרְשָׁבַע (v. 5).

(b) To what do the feminine suffixes in v. 3 refer?

(c) Explain the syntax in the last two verses.

VI. Translate :—

- 1 קְרֹאֲדוֹאֵת בְּנוֹיִם קִדְּשׁוּ מִלַּחֲמָה הָעִירוּ הַגְּבוּרִים יוֹשְׁבוֹ יַעֲלֶה כָּל אֲנָשִׁי
- 2 הַמִּלַּחֲמָה : כְּתוּ אֶתִּיכֶם לַחֲרֻבוֹת וּמִמְרוֹתֵיכֶם לְרִמְחִים הַחֲלָשׁ יֹאמֶר
- 3 גְּבוּר אָנִי : עֲשֹׂה וּבֹאוּ כָּל־הַנְּוִיִּם מִסָּבִיב וְנִקְבְּצוּ שָׁמָּה הַנְּחַת יְהוָה
- 4 גְּבוּרֶיךָ : יַעֲזֹרוּ וְיַעֲלֶה הַנְּוִיִּם אֶל־עֲמָק יְהוֹשֻׁפֶט כִּי יֵשׁ אֲשֶׁב לְשֹׁפֵט
- 5 אֶת־כָּל־הַנְּוִיִּם מִסָּבִיב : שְׁלַחוּ מִגַּל כִּי בִשָּׁל קָצִיר בָּאוּ רְדוּ בִּי־מִלֵּאָה גַּת
- 6 הַשִּׁיקוּ הַיִּקְבִּים כִּי רַבָּה רַעְתָּם : הַמְּנִים הַמְּנִים בַּעֲמָק הַחֲרוֹן כִּי קָרוֹב
- 7 יוֹם יְהוָה בַּעֲמָק הַחֲרוֹן : שְׁמִיט וִירַח קִדְּרוּ וּכְכָבִים אֲסַפּוּ נִנְהָם :
- 8 מִצְרִים לְשִׁמְמוֹהָ תַּהִיָּה וְאֲדוֹם לְמִדְבָּר שְׁמָמָה תַּהִיָּה מִחֲמַם בְּנֵי יְהוּדָה
- 9 אִשְׁר־שָׁבָּנוּ דָם־נָקִיָּא בְּאַרְצָם : וְיְהוּדָה לְעוֹלָם תֵּשֵׁב וִירוּשָׁלַם לְדוֹר וָדוֹר :
- 10 וְנִקְיִתִי דָמָם לֹא־נִקְיִתִי וְיְהוָה שִׁבֵּן בְּצִיּוֹן :

(a) In v. 1 the Septuagint has *προσαγάγετε καὶ ἀναβαλέτε*. What would be the corresponding Hebrew?

(b) Parse הַנְּחַת, and parse and remark on עֲשֹׂה and נִקְבְּצוּ (v. 3).

(c) Parse עָמַק הַחֲרוּץ (v. 5); and remark on עָמַק הַחֲרוּץ (v. 6).

(d) Remark on תָּמִים בְּנֵי יְהוּדָה (v. 8), and on נָקִיא (v. 9).

(e) Emend and translate the last verse in accordance with the Septuagint rendering—

Kal ἐκζητήσω τὸ αἷμα αὐτῶν, καὶ οὐ μὴ ἀθώωσω.

II.—APOLOGETIC THEOLOGY.

Tuesday, October 27, 1891.—2 to 5 o'clock.

PROOFS OF THE BEING OF GOD.

1. State how Hume attempted to invalidate the Proofs of the Being of God.
2. Examine Kant's view of the Moral Proof as subjective in character and wholly independent of the physico-theological arguments.
3. State and criticise the various forms of the Ontological Proof known to you.
4. Give an account of the Argument "e consensu gentium," and estimate its value in the light of recent objections to it.

MIRACLES.

1. Discuss the position that a study of the conditions under which miraculous narratives have arisen and gained credence warrants us in rejecting all such narratives.
2. Remark on the connection of miracles and doctrine.
3. Define, illustrate by a scriptural instance, and give reasons for accepting, doubting, or rejecting (1) Absolute Miracles, (2) Relative Miracles, (3) Miracles of Nature, (4) Miracles of Grace, (5) Miracles of Knowledge.
4. "There is a general presumption against any supposition of Divine agency not operating through general laws, or in other words, there is an antecedent improbability in every miracle, which, in order to outweigh it, requires an extraordinary strength of antecedent probability, derived from the special circumstances of the case" (J. S. Mill). Discuss this view of the logical Probability of Miracles. Refer to the views of Hume, Campbell, and Lotze.

THE RESURRECTION OF JESUS.

1. Give a general view of the evidence for the historical reality of the Resurrection of Jesus, and of the objections which have been taken to it.

2. Treat of the apparent discrepancies in the Gospel accounts of the Resurrection.

3. Review the theories of Strauss, Baur, and Renan regarding the origin and validity of the belief in the Resurrection of Jesus as recorded in the Gospels.

4. Comment apologetically and historically on the Pauline thesis :—
Ἐι δὲ Χριστὸς οὐκ ἐγήγερται, κενὸν ἄρα καὶ τὸ κήρυγμα ἡμῶν, κενὴ καὶ ἡ πίστις ὑμῶν.

Wednesday, March 23, 1892.—2 to 5 o'clock.

PROOFS OF THE BEING OF GOD.

1. Sketch briefly the history of the Ontological Proof from Descartes to Kant.

2. Describe the chief forms in which the Moral Proof has been presented.

3. Summarise Kant's Criticism of the Proofs, and explain how Hegel in view of it expounded them and maintained their validity anew.

4. Show how you would reason in the line of the theistic Proofs to disprove—1. Pantheism ; 2. Polytheism ; 3. Agnosticism.

MIRACLES.

1. What are the Biblical names (Hebrew and Greek) for Miracles? Remark on their derivations and significations.

2. Classify and criticise the various attempts which have been made to account naturally for the New Testament accounts of Miracles.

3. State Hume's argument regarding the Proof of Miracles ; and consider whether it has been satisfactorily answered.

4. Show how the Apologetic Argument from Miracles has been maintained against the attacks made upon it—1. by Celsus ; 2. by the Deists ; 3. by contemporary physical scientists.

THE RESURRECTION OF JESUS.

1. Is the Truth of Christianity dependent on the Resurrection of Jesus? State the grounds on which the negative view has been held, and discuss the question.

2. Examine the objections to Christ's Resurrection founded on alleged contradictions of the Evangelists.

3. Explain and examine the arguments for the Resurrection of Jesus founded—1. Upon the conduct of the Apostles after Christ's death ; and, 2. upon the existing institutions of the Church.

4. Review Baur's theory of the origin of the belief in the Resurrection

of Jesus, and examine the statement that “so far as history is concerned the necessary pre-supposition for everything that follows is not so much the fact of the Resurrection of Jesus itself as the belief in it.”

DEPARTMENT II.

I.—ECCLESIASTICAL HISTORY.

Wednesday, October 28, 1891.—10 to 1 o'clock.

1. Define Schism. What Schisms took place in 3rd and 4th centuries? What was the cause of each?
2. Tell what you know about the usages connected with Baptism at the end of the 3rd century. What was the nature of the belief regarding the significance of Baptism?
3. How many general persecutions of the Church were there? Tell what you know about each.
4. Mention the chief names among the Anti-Trinitarians of the 2nd and 3rd centuries. Classify their views. Describe Sabellianism.
5. Sketch the policy of Constantine and his sons with regard to the Church.
6. Give particulars with regard to the extent to which Christianity had spread by the end of the 2nd century. Who were the agents in this work?
7. Give an account of Celsus, Lucian, Porphyrius, Julian; their works and their views about Christianity.
8. Give a list of the principal non-heretical Apocrypha and Pseudo-epigrapha circulating in the Church during first three centuries. What was the reason of their popularity?
9. What do we learn from the *διδαχὴ* as to the celebration of the Lord's Supper, Baptism, and Church officials?
10. What were the laws of Rome bearing on such a matter as Christianity? Describe the procedure of the individual Emperors from Trajan to Commodus.
11. Give an account of the Synods of Elvira and Ancyra.
12. Compare and contrast the views of Episcopacy expressed in the Ignatian Epistles, and in the life and works of Cyprian.
13. Shew the importance of the Parliament of 1633 from the point of view of Ecclesiastical History.
14. Give an account of Charles I.'s efforts to impose a Liturgy on the Church of Scotland.
15. Sketch the relations between William and the Church of Scotland from 1689 to 1694.

16. Explain the following declaration by the Commission of Assembly, 1698: "We believe we have a better foundation for this our Church Government than the inclinations of the people or the laws of man."

17. Write historical and explanatory notes on The Large Declaration, The Engagement, The Act of Classes, The Rescissory Act, The Rabbling Act.

Thursday, March 24, 1892.—10 to 1 o'clock.

1. Distinguish the various ways in which during the first three centuries heathenism counteracted Christianity.

2. Give an account of the literary hostility of heathenism to Christianity down to 300 A.D. or thereby.

3. Describe the organisation, worship, and spread of Manichaeism, and tell shortly what you know about its origin and sources.

4. Define the Sub-apostolic age. Mention the writers and their works usually described as belonging to this age.

5. What schools or types of theology may be distinguished in the first three centuries? Mention the principal representatives of the Alexandrian school and their more important works. Give a biographical account of Tertullian and a topical account of his literary work.

6. Examine the claim of Rome to primacy with the help of the literature and history of the first three centuries.

7. What are the sources of our information as to Gnosticism? What elements go to form Gnosticism? Mention the principal systems of distinctively heathen origin.

8. Who were the apologists of the second century? Tell what you know about Justin Martyr and his literary activity.

9. Describe the theory and practice of Montanism. Explain its origin, and remark on what the Church owes to the conflict with it.

10. Write explanatory and historical notes on Homoousianism, Homoiousianism, and Homoiism.

11. What do you know about the origin and contents of the "Canons and Constitutions Ecclesiastical"?

12. What circumstances led to the Covenant of 1638? What was its nature? Show how far it represented popular feeling.

13. Tell what you know about the Cameronians and the part they played in the history of the Church of Scotland during the seventeenth century.

14. Write notes on The Tables, The Rye-house Plot, Apologetic Declaration, Claim of Right, and Bourignianism.

II.—SYSTEMATIC THEOLOGY.

Wednesday, October 28, 1891—2 to 5 o'clock.

THE DOCTRINE OF SIN.

1. In what respects may the New Testament teaching as to Sin be held to be an advance on that of the Old Testament?

2. State the chief positions regarding Sin laid down in the Westminster Confession, and indicate how and on what grounds they have been questioned and denied.

3. Give a critical summary and review of the Augustinian and Pelagian doctrines of Sin in their cardinal points of antagonism to each other.

4. Examine the argument for the doctrine of Original Sin which founds on the Universality of Sin.

THE DOCTRINE OF THE ATONEMENT.

1. Remark on the chief passages relating to the Atonement in the Pauline Epistles.

2. Give an account of Ritschl's or Campbell's doctrine of the Atonement.

3. Sketch the development of the Theory of Satisfaction in the Church, and review the Socinian objections to it.

4. Write historical and critical notes on the following topics :—(1) Vicarious and Propitiatory Sacrifice under the Law ; (2) Christ's Active and Passive Obedience ; (3) Hypothetical Universalism.

THE DOCTRINE OF THE SACRAMENTS.

1. In what respects and on what grounds did the Reformers reject the Roman Catholic doctrine of the Sacraments?

2. How has the doctrine of the Sacraments affected, and been affected by, the doctrine of the Church?

3. Give a brief account of the controversy between the Lutheran and Reformed Churches regarding the Sacrament of the Lord's Supper, and mention the grounds on which the Lutheran doctrine was rejected by the Reformed Theologians.

4. Summarise the arguments for and against Paedobaptism, and give an account of the controversy with the Anabaptists.

Thursday, March 24, 1892.—2 to 5 o'clock.

THE DOCTRINE OF SIN.

1. Give a general view of the teaching of Scripture as to the origin, nature, and extent of human depravity.

2. Classify and briefly characterise the various theories which have been proposed as to the origin of sin.

3. State and examine the Privative Theory of Sin, and comment historically on the thesis: "Peccatum non esse substantiam sed accidens."

4. Review the theories of the Immediate and Mediate Imputation of Adam's sin.

THE DOCTRINE OF THE ATONEMENT.

1. Can the various views given of the atoning work of Christ in the New Testament be combined into one theory? And if so, how?

2. State summarily in distinct propositions what is affirmed of the Atonement in the Westminster Confession and the Larger and Shorter Catechisms.

3. Review the principal arguments for and against the dogma of the vicarious substitution and satisfaction of Christ.

4. State and examine Ritschl's Theory of the Atonement. Compare it with any English theories that are akin to it.

THE DOCTRINE OF THE SACRAMENTS.

1. Show how the Doctrine of the Sacraments has been influenced by the Doctrine of the Church and Ministry.

2. What different views have been held as to the proper subjects or recipients of Baptism? On what grounds have they been held?

3. State and examine the polemic of John Knox and other Reformers against the Mass as Idolatry. How did Luther, Zwingli, Oecolampadius, and Calvin interpret the words of institution: *Τοῦτό ἐστιν τὸ σῶμα μου*?

4. Write historical and critical notes on the following topics:—
1. Baptismal Regeneration; 2. Consubstantiation; 3. Extreme Unction.

III.—BIBLICAL CRITICISM.

Thursday, 29th October 1891.—10 to 1 o'clock.

A. MANUSCRIPTS, VERSIONS, AND DISPUTED PASSAGES OF NEW TESTAMENT.

1. In Prof. Sanday's New Testament the following summary is given of critical materials for deciding on the best reading in 1 Cor. xi. 24.

Ἀλάβετε, φάγετε. C³KLP etc.; Vulg *codd.* (tol. al) Syrr (Pesh-Itarel)

Goth. Aeth.; Bas. Chrys. *ad loc.* (*codd. plur. et ed.*) al.

om. *Σ*ABC*DEFG, *minusc. opt.*; Vulg *codd. opt.* Aegyptt

(Memph-Theb) Arm.; Chrys. *cod. opt.* Cypr. al.; Eud.

κλῶμενον *Σ*^cC³D^bet^c EFGKLP etc.; Bas. Chrys. al.

om. *Σ**ABC*17 67** ; *Edd.*

Write out the foregoing in full, explaining the symbols and contractions, and giving the dates of the authorities named.

B. OLD TESTAMENT INTRODUCTION, PENTATEUCH AND HISTORICAL BOOKS.

2. In Pentateuch criticism what is meant by the Fragment Theory, Supplement Theory, Document Theory? Name a few of the best known advocates of each, Continental, British, and American.

3. There is a theory described as follows, "The Prophets older than the Law, and the Psalms later than both." Give an account of the origin and progress of the view, and state upon what—in addition to literary criticism—it rests its conclusions.

4. The following are some of the names and symbols used for the sources of the Pentateuch, *Grundschrift*, Supplementer, First Elohist, Second Elohist, Junior Elohist, *Book of Origins*, Third Narrator, Fourth Narrator, Annalist, Prophetic Narrator, Theocratic Narrator, J, E, *PC(Q)*, Deuteronomist.

a. Give the names of the critics whose theories are represented.

β. How many *distinct* sources are enumerated above? Group the symbols accordingly.

γ. Write notes explaining the names in italics.

5. What "codes of law" are distinguished by modern criticism in the Pentateuch? Give the approximate dates as assigned by Wellhausen or Kuenen.

6. What was the Book found in the Temple in the 18th year of Josiah? Give your reasons for your answer.

7. "The historical books afford a strong presumption that the Law of Deuteronomy did not originate until after the establishment of the monarchy." Discuss this statement with regard to the law concerning the place of worship and sacrifice.

8. Was the distinction between Priests and Levites original or developed?

9. If you think there are allusions to the laws of Leviticus and Deuteronomy in the books of Amos and Hosea, give some idea of their nature and extent? [If you think there are not, what explanation can you give of apparent allusions?]

10. Compare Chronicles with the books of Samuel and Kings with regard to their contents, and their value as history.

C. THE HERETICS AND THE NEW TESTAMENT CANON.

11. Give the dates of Plotemacus and Heracleon; and indicate their evidence as to the existence and authorship of John's Gospel.

12. What were Marcion's Gospel, *εὐαγγέλιον κατὰ Βασιλείδην*, *Veritatis Evangelium*? What bearing has each on our ideas with regard to the history of the N. T. Canon?

13. Translate the following extract with regard to Basilides.

Ἐπεὶ δ' ἦν ἀπορον εἰπεῖν προβολὴν τινα τοῦ μὴ ὄντος Θεοῦ γεγενῆσθαι τι

οὐκ ὄν, —φεύγει γὰρ πάνν καὶ δέδοικε τὰς κατὰ προβολὴν τῶν γεγονότων οὐσίας ὁ Βασιλεὺς — ποίας γὰρ προβολῆς χρεία, ἢ ποίας ὕλης ὑποθέσεις, ἵνα κόσμον Θεὸς ἐργάσῃται, κατὰπερ ὁ ἀράχνης τὰ μηρύματα, ἢ θνητὸς ἄνθρωπος χαλκὸν ἢ ξύλον, ἢ τι τῶν τῆς ὕλης μερῶν ἐργαζόμενος λαμβάνει; Ἀλλὰ εἶπε, φησί, καὶ ἐγένετο, καὶ τοῦτό ἐστιν, ὡς λέγουσιν οἱ ἄνδρες οὗτοι, τὸ λεχθὲν ὑπὸ Μωσέως· Γενηθήτω φῶς, καὶ ἐγένετο φῶς. Πόθεν, φησί, γέγονε τὸ φῶς; ἐξ οὐδενός· οὐ γὰρ γέγραπται, φησί, πόθεν, ἀλλ' αὐτὸ μόνον ἐκ τῆς φωνῆς τοῦ λέγοντος, ὁ δὲ λέγων, φησὶν, οὐκ ἦν, οὐδὲ τὸ γενόμενον ἦν. Γέγονε, φησὶν, ἐξ οὐκ ὄντων τὸ σπέρμα τοῦ κόσμου, ὁ λόγος ὁ λεχθεὶς· γενηθήτω φῶς, καὶ τοῦτο, φησὶν, ἐστὶ τὸ λεγόμενον ἐν τοῖς εὐαγγελίοις· Ἦν τὸ φῶς τὸ ἀληθινόν, ὁ φωτίζει πάντα ἄνθρωπον ἐρχόμενον εἰς τὸν κόσμον. Λαμβάνει τὰς ἀρχὰς ἀπὸ τοῦ σπέρματος ἐκείνου καὶ φωτίζεται.

Give a note on the significance of this passage, and the controversies concerning it.

Friday, March 25, 1892.—10 to 1 o'clock.

1. Give the principal various readings in the Lord's Prayer in St Matthew's Gospel, and the support they have from MSS. Versions and Fathers.

2. State what you know of the Thebaic and Memphitic versions of the New Testament, giving an account of the age, history, completeness, and critical value of each.

3. State what you know of the three Uncial MSS. of most recent date in the following list (being the MSS. evidence according to Sanday for the Textus Receptus in Matt. xvii. 21) :—

Σ⁶ C D E F G H K L M S U V X Γ Δ Π Σ Φ

4. Sketch all the essential features of that view of the origin of the Pentateuch which at present prevails among German and Dutch theologians. Give a similar outline of the view of the distinctively new French School. Mention the names of any well-known scholars who make the priestly historico-legislative work precede the Deuteronomic.

5. How far is it possible to speak of the unanimity of the modern critical school? Give a reasoned answer.

6. Follow Astruc's basis document (Elohistic, symbol A) through succeeding systems, noting changes of name and rôle. Especially say what it is now usually called.

7. How does Kuenen reconstruct the history of Israel? Examine this side of his theory, showing what he says about the principal facts in the Pentateuch—*e.g.*, the Patriarchs, The sojourn in Egypt, the life and work of Moses, The Decalogue, The worship of God, The amount of Law, Ritual, and Religious truth really drawn from Moses in later times. Can you compare with this the system of Reuss?

8. What, according to critics, are the state of preservation, contents (noting specially where each document begins), and characteristics of the documents E and J? How is JE distinguished from P?

9. What is the name now commonly applied to the section Leviticus xvii.-xxvi.? Say what it contains, and what its distinguishing feature is? How, in the view of modern criticism, is it related to Deuteronomy and Ezekiel?

10. What is the relation of Exodus xx.-xxiii. to Deuteronomy in respect of (α) form, (β) general contents, (γ) law of central sanctuary, (δ) sacrifice and altars?

11. "When Deuteronomy was composed JE and P were not yet united into a single work, and JE alone formed the basis of Deuteronomy." Exhibit the grounds of this statement from Dr Driver's Book.

12. On what grounds is the unity of Deuteronomy denied, and how has it been divided, and how have its portions been referred to different authors? State the views of Wellhausen, Driver, and Eichthal.

13. Were the "Judges" mainly local and contemporary? Give your reasons.

14. Give an account of the Gnosticism of Valentinus. Name the constituents of his Pleroma. Can you read any part of the system as an allegory?

15. What was the position of Gnosticism as regards Sin, Redemption, Salvation?

16. Translate :—

Τοιαύτης δὲ τῆς ὑποθέσεως αὐτῶν οὐσης, ἣν οὔτε προφήται ἐκήρυξαν, οὔτε ὁ Κύριος ἐδίδαξεν, οὔτε ἀπόστολοι παρέδωκαν, ἣν περὶ τῶν ὅλων αὐχοῦσι πλεῖον τῶν ἄλλων ἐγνωκέναι, ἐξ ἀγράφων ἀναγινώσκοντες, καὶ τὸ δὴ λεγόμενον, ἐξ ἁμμου σχοινία πλέκειν ἐπιτηδεύοντες, ἀξιόπιστα προσαρμόζειν πειρῶνται τοῖς εἰρημένοις, ἥτοι παραβολὰς κυριακάς, ἥ ῥήσεις προφητικάς, ἥ λόγους ἀποστολικούς, ἵνα τὸ πλάσμα αὐτῶν μὴ ἀμάρτυρον εἶναι δοκῇ. *Iren. I. 8. 1.*

Καὶ οὐ μόνον ἐκ τῶν εὐαγγελικῶν καὶ των ἀποστολικῶν πειρῶνται τὰς ἀποδείξεις ποιεῖσθαι, παρατρέποντες τὰς ἐρμηνείας, καὶ ῥαδιουργοῦντες τὰς ἐξηγήσεις· ἀλλὰ καὶ ἐκ νόμου καὶ προφητῶν, ἃ τε πολλῶν παραβολῶν καὶ ἀλληγοριῶν εἰρημένων καὶ εἰς πολλὰ ἔλκειν δυναμένων τὸ ἀμφίβολον διὰ τῆς ἐξηγήσεως, ἕτεροι δὲ δεινῶς τῷ πλάσματι αὐτῶν. . . . *Iren. I. 3. 6.*

BACHELORS OF DIVINITY.

14th April 1892.

1 William Borland, M.A.	Robert Moore, B.A.
John Craig, M.A.	John Muir, M.A.
James Nimmo Cuthbert, M.A.	Robert Oswald, M.A.
Roger Stewart Davidson, M.A.	David Andrew Rollo, M.A.
5 James William Falconer, M.A.	15 Alexander Christian William
Robert Alexander Falconer,	Saunders, M.A.
M.A.	William Serle, M.A.
John Dick Fleming, M.A.	Samuel James Ramsay Sibbald,
Daniel Lewis Fraser, M.A.	M.A.
Alexander Gibson, M.A.	John Lawrie Symington, M.A.
10 John Kennedy, M.A.	James Thomson, M.A.

DEGREE OF DOCTOR OF DIVINITY (D.D.).¹

The Degree of Doctor of Divinity is conferred *honoris causâ tantum* :—and is granted in absence in special cases only. The Register of Doctors of Divinity begins in 1709, with the names of Edmund Calamy, Daniel Williams, and Joshua Oldfield. The names of Evans, Harris, and Isaac Watts follow in 1728. The Register now includes above 300 names.

The following is a list of those who have received the Degree of Doctor of Divinity in the years 1888-92 inclusively² :—

1888.	1890.
Thomas Brown	David Douglas Bannerman
David Johnstone, B.A., B.D.	R. H. Lundie, M.A.
Alexander Oliver, B.A.	Canon J. H. Overton
Alberto Rével	
1889.	1891.
*Griffith John	Robert Hutton, M.A.
*Professor Abraham Kuenen	*John Gibson Paton.
Archibald Henry Sayce, M.A.	D. W. Simon, M.A., Ph.D.
Norman M. L. Walker	

14th April 1892.

Rev. William Balfour, Minister of Holyrood Free Church, Edinburgh.

Rev. Cornelius Giffen, Minister of St Mary's, Edinburgh.

Rev. Newham Hall, of Christ's Church (Congregational), London.

¹ Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent ceremonial, on giving at least a week's notice.

² The names of those who received the Degree, prior to 1859, will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University, since its foundation," published in 1858, and the names of those who received the Degree from 1859 to 1888, both years included, will be found in the List of Graduates, published in 1889.

* Conferred *in absentia*.

Bursaries, Scholarships, Fellowships, &c.

I.—BURSARIES.

A.—PRESENTATION BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	Years.	Annual Allowance to each Bursar	Patrons.
I.	1703	Agnes Nairne.	£3 0 0	1	1	£8 ..	Senatus Academicus.
II.	1715	Sir James M'Lurg of Vogrie, sometime Dean of Guild of Edinburgh.	8 6 8	1	4	£8 6 8	Dean of Guild of Edinburgh, and Wm. Brown, Esq., surgeon, alternately
III.	1764	Rev. John Penman, Minister of Bothkennar.	8 0 0	1	4	8 0 0	R. G. G. Gilmour of Craigmillar.
IV.	1766	Rev. Robert Alexander, Minister of Girvan.	About 19 0 0	1	4	About 19 0 0	Kirk-Session of Girvan and Presbytery of Ayr.
V.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk	14 8 0	1	4	14 8 0	Governors of George Heriot's Trust, Principal of the University, Minister of the High Church, & Minister of New Greyfriars' Church.
VI.	1838	Do. Do.	About 23 0 0	1	4	About 23 0 0	The Principal, and Profs. of Hebrew, Divinity, Church History.
VII.	1838	J. Stewart Hepburn of Colquhalzie, Esq.	13 2 6	1	3	13 2 6	Committee of the Presbytery of Edin.
VIII.	1858	Do. Do.	13 2 6	1	3	13 2 6	Do.
IX.	1864	Do. Do.	13 2 6	1	3	13 2 6	Do.

I. In abeyance at present.

II. The *M'Lurg Bursary* is tenable for four years at the Theological Classes.
Bursar—1891, *John Burr, M.A.*

III. The *Penman Bursary*—1888, *Alex. H. Christie, M.A.*

IV. This Bursary consists of the interest of £420, lent on heritable security, and of £75, 17s. of accumulated interest. It must be held by a Student from the parish of Girvan, presented by the Session; whom failing, by one within the Presbytery of Ayr, to be appointed by the Presbytery. *Vacant.*

V. The *Blair Bursary* can be held only by a young man who has been brought up in George Heriot's Hospital, and has become a Student of Divinity in the University of Edinburgh. The amount depends on the rate of dividend payable on the stock in which the foundation money is invested. *Bursar*—Vacant.

VI. To be applied for the benefit of a Student of Divinity, whether a graduate or not. *Bursar*—1890, *John Kennedy, M.A.*

Bursaries in Divinity.

VII., VIII., and IX. The sums attached to these Bursaries are payable to Divinity Students of the Church of Scotland of the first or second year towards the expense of their education at the University of Edinburgh. Each is tenable for three years. For one bursary Gaelic-speaking students have a preference; for all, Students from the Presbyteries of Weem and Auchterarder. *Bursars*—1891-2, *George Beale, Charles D. Mcintosh.*

B.—COMPETITION BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1646	Buchanan of that Ilk.	£20 16 8	2	3	£10 8 4	Town Council.
II.	1666	William Struthers.	13 17 9	1	3	13 17 9	Do.
III.	1685	Archibald Leighton.	7 10 0	1	3	7 10 0	Do.
IV.	1687	Andrew Ramsay and Sir Andw. Ramsay of Abbotshall.	16 13 4	1	3	16 13 4	Do.
V.	1695	King William III.	50 0 0	2	2	25 0 0	Senatus Academicus.
VI.	1867	Miss Mary Ettles of Inverness.	110 9 3	3	3	About 35 0 0	Senatus.
VII.	1873	Grierson of Ogscastle's Trustees.	80 0 0	3	1	26 13 4	Senatus.
VIII.	1878	Mrs Isabella Webster.	150 0 0	(2 (1	3 3	56 5 0 37 10 0	Senatus.
IX.	1878	Dr Andrew Thomson	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.
X.	1879	Mrs Barbara Mylne.	30 0 0	1	3	30 0 0	Moderator, Procurator, and Principal Clerk of General Assembly.
XI.	1882	William Renton.	19 17 8	1	3	19 17 8	Prof. of Theology.
XII.	1884	Robert Hunter.	33 15 0	2	2	16 17 6	Principal and Prof.
XIII.	1889	James Simson, Edinburgh.	175 0 0	7	3	25 0 0	Presbytery of Edinburgh.
XIV.	1892	Thomas Lockerby, London.	About 25 0 0	1	3	About 25 0 0	Senatus.

I. By Ordinance, No. 79, of the Scottish Universities' Commissioners, and under the Order of her Majesty in Council 1868, each of the Buchanan Bursaries is open for competition to all Masters of Arts of any of the Universities of Scotland, or to Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours, entering on their first or second Session in the Faculty of Divinity in the University of Edinburgh. No person is admissible to competition who has for more than one Session been a Student in the Faculty of Divinity in any of the Scottish Universities. Each Bursar holds his Bursary for three years, subject to this condition, that he shall, during that period, give regular attendance, as a Student of Theology, in the University. If it appears to the Senatus Academicus desirable, for the purpose of distributing the benefits of competitive Bursaries in Theology among Students of different years, it is lawful, for that purpose only, to appoint a Student for a shorter period. No person can hold the Bursary along with any

other Bursary, Fellowship, or Scholarship in any Scottish University. *Bursars*—1889, *J. R. Macdonald, M.A.*; *J. K. Wilkin, M.A.*, for two years.

II. By Ordinance, No. 80, of the Universities' Commissioners, and subsequent Order in Council, the regulations for this Bursary are the same as those for the Buchanan Bursaries. *Bursar*—1890, *Gordon C. Pringle*.

III. By Ordinance, No. 85, of the Univ. Com., and subsequent Order in Council, the regulations for this Bursary are the same as those for the Buchanan Bursaries. *Bursar*—1889, *M. B. M'Innes, M.A.*

IV. By Ordinance, No. 81, of the Univ. Com., and subsequent Order in Council, the regulations for this Bursary are the same as those for the Buchanan Bursaries. *Bursar*—1891, *Vacant*.

V. By Ordinance, No. 76, of the Universities' Commissioners, and subsequent Order in Council, each King William Bursary is open to competition to all Masters of Arts of any of the Universities of Scotland, or Students who have passed the necessary examinations for the Degree of M.A., and who have attended for one Session, and no more, in the Faculty of Divinity in the University of Edinburgh: Provided that no person shall be a competitor who has attended for one or more Sessions in the Faculty of Divinity in any other of the Scottish Universities. The examinations in the competition shall be conducted by the Professors in the Faculty of Divinity in the University. Each Bursar shall hold his Bursary for two years, subject to the condition that he shall, during that period, give regular attendance as a Student of Theology in the University. No person shall hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University. When the two Bursaries fall vacant at one time, one Bursar shall be appointed for two years, and the other for one year. *Bursars*—1891, *Robert S. V. Logie, M.A.* 1892, *David C. Stewart, M.A.*

VI. Founded in memory of her brother, J. Ettles, Esq., of Havannah. Open to those who have passed all the examinations for M.A., and are in the first year of their theological course. Cannot be held with any other Bursaries or Scholarships. See Deed of Foundation in CALENDAR for 1867-68. *Bursars*—1889, *W. A. Knowles, M.A.* 1890, *Adam Fergusson, M.A.* 1891, *Hotchkin H. Murray, M.A.*

VII. As in the case of the Faculty of Arts (see No. LIII.), a student from the parishes of Crawford or Leadhills, is, if found duly qualified in respect of attainments, appointed to a Bursary in his first year, and holds it (unless he has failed to show himself a diligent student) to the end of his Theological curriculum. Failing any student from those favoured parishes, the Bursary or Bursaries will be thrown open to competition, but the winner only holds his Bursary for one year in each case. In the second and third years a student from Crawford or Leadhills has again a preference, but holds the Bursary for one year only. See p. 372 of CALENDAR, 1877-8. *Bursars*, 1891—First year, *James H. Pearson*; second year, *Not awarded*; third year, *John Craig, M.A.*

VIII. Founded by Mrs Isabella Webster, 38 Heriot Row, Edinburgh, in memory of her husband, George Webster, Esq. There are three Bursaries,—two of £56, 5s. each, and one of £37, 10s., open to Students of Divinity in connection with the Church of Scotland in their first year, who have successfully passed all their Examinations for the degree of M.A. in any Scottish university, whether they have actually graduated or not. Each is tenable for three years. See

Deed of Foundation in CALENDAR for 1878-9, p. 377. *Bursars*—1889, *D. A. Rollo, M.A.* 1890, *William B. Stevenson, M.A.* 1891, *John Ritchie, M.A.* (3 years); *Robert Venters, M.A.* (1 year).

IX. For the *Thomson Bursaries* application may be made to Messrs Traquair, Dickson, & Maclaren, 11 Hill Street. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh, preferred. The subjects of Examination are Latin and Classical Greek, Mathematics and Natural Philosophy, Mental Philosophy (including Logic) and Moral Philosophy and Elementary Hebrew, Apologetics, and Greek Testament. See p. 374 of CALENDAR for 1880-81. *Bursars*—1888, *James Thomson, M.A.* 1889, *William Serle, M.A.* 1890, *Duncan Cameron, M.A.* 1891, *John M'William, M.A.*

X. *Mylne Bursary*.—Founded by Mrs Barbara Macaulay or Mylne, in memory of her husband, the Rev. Andrew Mylne, minister of the parish of Dollar. The Bursary (being the free proceeds of £750) which is for behoof of Students for the ministry of the Church of Scotland, of Scottish birth, tenable during the curriculum in Divinity, is awarded at the end of the session, after examination (of first year's students) on the subjects taught in the Theological Classes during the session. No one may become a Candidate who has not given his whole time to study during the session preceding the date of Examination, nor may the holder engage in paid work during any session in which he holds the Bursary. It cannot be held along with any other Bursary, Scholarship, or Endowment. See Deed of Foundation at page 377 of CALENDAR for 1880-1. 1892, *Thomas Marjoribanks M.A.*

XI. Founded by the late William Renton, of 20 Royal Terrace, Edinburgh. The Faculty of Theology are the Patrons and Trustees. The Bursary may be held for three years, if the Bursar continues so long to prosecute his studies in Theology at the University of Edinburgh, with a view to the ministry in the Church of Scotland, and if not, then for the whole period he continues at the same. The student presented must have attained the age of sixteen, and not exceed the age of twenty-one years, and must be appointed after an examination in the month of November on such subjects as the Professors of the Faculty of Theology consider proper. 1890, *James A. Robertson, M.A.*

XII. Founded by the late Robert Hunter, Dalhousie, Chesters; the Principal and Professors being Patrons. These Bursaries are for the benefit of Students of the Church of Scotland, and are awarded at close of first Session in Divinity, and are tenable for two years. Bursars must attend two Sessions in Chemistry and Geology, taking at least one of these Classes each Session. Students of the name of Hunter and Hamilton from the parishes of Temple or Cockpen have a preference, but preferential Candidates must attain to a fixed percentage. Bursars must produce certificates of diligence in the Classes of Chemistry and Geology. See excerpt from Deed of Foundation, page 437 of CALENDAR for 1885-86. 1891, *Arch. Jas. Miller, M.A.*

XIII. These Bursaries are open to Students who are entering on their first Session in Divinity, and are tenable for three years. For further details and subjects of examination (which differ somewhat from the University Examination for first year's Bursaries), apply to the Rev. Dr Langwill, Currie, or to the Rev. John Patrick, Greenside, Edinburgh. *Bursars*—1890, *John Muirhead, M.A.*; *John Wedderspoon, M.A.*; *Ian R. Fraser, M.A.*

XIV. Founded by the late Thomas Lockerby, Esq., London. The Bursary is tenable for three years, and is open to "Students who desire to become ministers of the Church of Scotland only." See Excerpt from Disposition, page 545 of CALENDAR for 1890-91.

C.—PRESENTATION BURSARIES, Open only to Graduates or Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1695	Robert Bayne of Pitcairley.	£25 0 0	1	3	£25 0 0	Society of Sons of the Clergy.
II.	1695	James Nairne.	16 13 4	1	3	16 13 4	Prof. of Divinity.

I. This formerly belonged to Ferguson of Raith, and was sold by him to the late Principal Lee; and by Principal Lee's representatives to Professor Crawford; and by Professor Crawford's representatives to the Society for the Sons of the Clergy. By Ordinance, No. 71, of the Universities' Commissioners, and subsequent Order in Council, the following are the regulations as to this Bursary:—Each Bursar shall hold the Bursary for three years, subject to the condition that he shall, during that period, give regular attendance as a Student in Theology in the University of Edinburgh. No person shall hold the Bursary along with any other Bursary, or with any Scholarship in the University. *Bursar—1889, J. W. MacGill, M.A.*

II. This Bursary is tenable for three years, or for such period as the Bursar shall give regular attendance as a Student of Theology in the University of Edinburgh. See Ordinance, No. 67, of the Universities' Commissioners, and subsequent Order in Council. *Bursar—1890, John L. Symington, M.A.*

D.—BURSARIES gained in Faculty of Arts, the holders of which are at liberty to study in the Faculty of Divinity.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1809	Dr Donald Grant, London.	£180 0 0 About	2	4	£90 0 0 About	Dr Grant's Trustees.
II.	1846	John Jamieson, Edinburgh.	26 0 0 About	1	4	26 0 0 About	Principal and two Professors.
III.	1871	The Sibbald Trustees.	150 0 0	5	3	30 0 0	The Trustees of Dr J. R. Sibbald.
IV.	1889	Daniel Maclaurin, London.	70 0 0	1	4	70 0 0	Town Council.

I. See under Faculty of Arts, No. XXVIII. Grant Mortification (pp. 196 & 201).

II. See under Faculty of Arts, No. XXXIII. Jamieson Bursary (pp. 196 & 201).

III. See under Bursaries in Arts, No. LII. Sibbald Bursaries (pp. 197 & 203).

IV. See under Faculty of Arts, No. LXXX. Maclaurin Bursary (pp. 198 & 208).

*II.—PRIZES.**I.—BARTY MEMORIAL PRIZE.*

The Barty Memorial Prize of £25 for scholarship in Hebrew and Hellenistic Greek is open to entrants to the Divinity Halls of the four Scottish Universities.

1888-89. S. J. Ramsay Sibbald, Edin.

1889-90. David M. Kay, M.A., B.Sc. Edin.

1891-92. George Beale, M.A. Edin., and George Christie, St Andrews.

II.—HEPBURN PRIZE.

The Hepburn Prize of £25 (which may be divided), open to all Students in actual attendance at the Divinity Hall, may be awarded annually for an essay on a prescribed subject.

1891. Divided between Martin B. M. Innes and Adam W. Ferguson.

III.-XII. THE GUNNING VICTORIA JUBILEE PRIZES.

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded ten prizes in the Faculty of Divinity of the University of Edinburgh, to be known as "The Gunning Victoria Jubilee Prizes."

These prizes are ten in number, and comprise a series of five prizes of £50, £40, £30, £20, and £10, for excellence in Theological subjects, and a series of five prizes of similar values for excellence in Natural Science subjects. In their order the prizes in each series correspond in value. A minimum standard of proficiency will be required in each series. The successful competitors may each take both the prize in the Theological, and the prize in the Natural Science series to which their marks may respectively entitle them.

The prizes are competed for triennially at the close of the Divinity Session, and are open to all Students of the Church of Scotland, or other Scottish Churches holding the Confession of Faith, who are graduates of this University, or have attended two classes in the Faculty of Divinity in this University, and who have completed their Theological curriculum within two years of the close of the session when the competition takes place.

The examination in the Natural Science series will be on Natural History, Botany, and Geology, and of the same standard as the First B.Sc. Examination in Natural Science. The Examination in the Theological series will be in Theology proper, the Language and Literature of the Old Testament, Ecclesiastical History, and Biblical Criticism.

The Examiners shall be the Professors of the subjects of examination in the University of Edinburgh ; with the addition of a member of the Senatus of the New College, to be appointed by the Faculty of Divinity.

The first examination under this scheme will be held at the close of Session 1892-93. See Revised Scheme, p. 519 of CALENDAR 1889-90.

III.—SCHOLARSHIPS.¹

I.—PITT CLUB DIVINITY SCHOLARSHIP.

This Scholarship was instituted in 1862 by the Pitt Club, is of the annual value of £111, 8s. 2d., and is tenable for three years. By Ordinance No. 77, of the Universities' Commissioners, this Scholarship is open to competition to all Masters of Arts of any of the Universities of Scotland who have given regular attendance in the Faculty of Divinity in the University of Edinburgh for three complete Sessions, and who are in the course of studying, with the view of becoming Clergymen of the Church of Scotland. No person is admissible who has been entered as a Student of Divinity more than six years prior to the time of the competition.

Candidates are examined on (1) The Evidences of Revealed Religion ; (2) Systematic Theology ; (3) Hebrew ; (4) Church History ; (5) Biblical Criticism. It cannot be held with any other Scholarship, Fellowship, or Bursary of any Scottish University, or along with any parochial or pastoral charge, whether as minister or assistant.

1887. George Galloway, B.D. | 1890. *Alex. S. Martin, M.A.*

II.—MAXTON DIVINITY SCHOLARSHIP.

This Scholarship was founded by the Trustees of the late John Maxton, Esq., in 1867, is of the annual value of £42, 8s., and is tenable for three years. It is open only to Students who are members of the Established Church of Scotland, and who have completed the course of study in the Faculty of Divinity in the University of Edinburgh. (See Deed of Foundation, at p. 234 of CALENDAR for 1867-8.)

1887. Henry Ranken, B.D. | 1890. *John James Galloway, M.A.*

¹ The names of Scholars are retained in the Calendar for five years.

It has been agreed by the Senatus and the Faculty of Divinity, in regard to the Fellowships and Scholarships of the funds of which they are severally the administrators, that

1. The *Pitt Theological Scholarship* (£103, 2s. 8d.) shall be competed for when it falls vacant.

2. The *Aitken Theological Scholarship* (£103, 14s. 2d.) shall be reserved from competition when it falls vacant in the same year with the Pitt.

3. The *Glover Divinity Scholarship* (£34, 8s.) shall (according to its conditions) not be open to competition when the Pitt or Maxton may be open, and shall be similarly reserved when the Aitken is open.

4. That meanwhile the *Maxton* (£42, 8s.) be competed for when it is vacant.

III.—THE GLOVER DIVINITY SCHOLARSHIP.

This Scholarship was founded in 1875 by Subscribers to a Fund for commemorating the memory of the Rev. W. Glover, D.D., and by the University Endowment Association. It is of the annual value of about £34, 8s., tenable for three years, and open to all Masters of Arts of any of the Universities of Scotland who have finished their study of Theology, before entering the Church of Scotland, within six years, and who have attended the last Session of their course at least in the University of Edinburgh. It cannot be held with any other Divinity Scholarship or Bursary in any Scottish University, and it is not offered for competition in any year where there is a vacancy in the Pitt Divinity Scholarship or the Maxton Divinity Scholarship. *See* Deed of Foundation, at p. 343 of CALENDAR for 1875-76.

IV.—THE AITKEN THEOLOGICAL SCHOLARSHIP.

This Scholarship, founded in 1875 by bequest of the Rev. David Aitken, D.D., formerly minister of Minto, is of the annual value of £109, 19s. 2d. Its purpose is to make provision for the study of Church History and Biblical Criticism at one or more University Seats in Germany, or elsewhere on the Continent of Europe, in the case of meritorious students at Edinburgh University. It is to be awarded, after competitive examination (on due proficiency being shewn), to a Student in Divinity of the University of Edinburgh, who is a Graduate in Arts of that University of not more than four years' standing. It is tenable for two years; but the Senatus may extend the term for another year if it appear to them desirable. The time of the competition to be fixed and publicly intimated by the Senatus at least three months before; and the Senatus are also at liberty to prescribe whether one Semester or two Semesters in the foreign University shall be attended in each year. It is not offered for competition in the same year as the Pitt Divinity Scholarship or the Glover Divinity Scholarship. *See* Deed of Foundation at p. 344 of CALENDAR for 1876-77.

1888. Alexander Still, B.D., who resigned it for the "David Kidd" Scholarship.	1889. John C. Matthews, B.D. 1892. J. J. Trotter, M.A.
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V.—THE DAVID KIDD DIVINITY SCHOLARSHIP.

This Scholarship, which is of the annual value of £34, 6s. 10d., is tenable for three years, and is awarded, after competitive examination in Theology (same as for B.D.), to students of any of the Universities of Scotland who are natives of Scotland, and who have finished their course of study with the view of becoming Ministers of the Church of Scotland. *See* Deed of Foundation in CALENDAR for 1879-80, p. 354.

1888. Alexander Still, B.D.	1892. David A. Rollo, B.D.
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VI.—VANS DUNLOP SCHOLARSHIP IN HEBREW AND ORIENTAL (SEMITIC) LANGUAGES.

The Competition is open to all Matriculated Students (*a*) who have regularly attended Classes in the University for not less than two and not more than seven years, (*b*) who have attended at least two courses under the Professor of Hebrew and Oriental Languages, and (*c*) who have not discontinued attendance at the University for more than one year.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Oriental Languages, and an Examiner to be appointed by the Senatus.

The conditions of tenure are the same as those applicable to the Vans Dunlop Scholarships in Arts. The next competition will take place on March 1893.

1890. { *James Thomson, M.A.,*
 { *Charles H. Titterton, M.A.* } equal.

VII.—VANS DUNLOP SCHOLARSHIP IN HISTORY.

The competition is open to all Matriculated Students of not less than two, and not more than six, years' standing, who have attended one or more courses of Lectures either by the Professor of History or by the Professor of Ecclesiastical History, and who have not discontinued attendance at the University for more than one year. The Examiners are the Professor of History, the Professor of Ecclesiastical History, and either the Professor of Humanity or the Professor of Greek. The next Examination will be held in October 1892.

VIII.—BRUCE OF GRANGEHILL AND FALKLAND SCHOLARSHIPS.

These Scholarships were founded in 1865 by Mrs Tyndall Bruce of Falkland, and are of the annual value of £100. They come into operation only when a vacancy occurs in any one of the three Scholarships of this name in the Faculty of Arts, by the death, resignation, or dismissal, of a Scholar during the period of his tenure of the Scholarship; and are tenable in this Faculty during the remainder of that period. They cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 a year. The subjects of Examination are prescribed from time to time by the Faculty.

1887. J. More Middleton, M.A. | 1891. *David A. Rollo, M.A.*
1888. Alexander S. Martin, M.A. |

IX. and X.—THE JEFFREY SCHOLARSHIPS.

These Scholarships, two in number, were founded in 1887 by Miss Jane Jeffrey of Victoria Terrace, Portobello. They are each of the

annual value of about £77, and are tenable for one year. They are awarded annually for special proficiency in the subjects embraced in each of the four departments of Divinity, Hebrew and Oriental Languages, Ecclesiastical History, and Biblical Criticism; and are open to Students of Divinity in connection with the Church of Scotland who shall have given regular attendance for at least one Session on the Divinity Classes in this University, including the class with which the Scholarship competed for is specially connected. They are competed for in the following order:—first year, Divinity, and Hebrew and Oriental Languages; second year, Ecclesiastical History and Biblical Criticism; and so on from year to year. The Examination at the close of Session 1892-93 is in Divinity and Hebrew and Oriental Languages. See Deed at page 497 of CALENDAR for 1888-89.

1889. *Divinity*—William C. Allan, M.A.

Prox. accessit, William Roger, M.A.

Hebrew and Aramaic—John William Murray.

1890. *Ecclesiastical History*—Peter Macgregor, M.A.

Biblical Criticism—Samuel Dunlop, B.A.

1891. *Divinity*—James M. Kirkpatrick, M.A.

Hebrew and Arabic—James N. Cuthbert, M.A.

1892. *Ecclesiastical History*—John Kennedy, M.A.

Biblical Criticism—S. J. Ramsay Sibbald, M.A.

XI.—COBB SCHOLARSHIP.

This Scholarship, founded in 1889, is a bequest by the late Miss Matilda Johnston Cobb, Broughty Ferry. It is of the annual value of £35, and is tenable for three years. The subjects of Examination are Hebrew, Greek, Latin, and Mathematics, and the Scholarship is open to competition amongst Students who are entering on the study of Divinity with a view to becoming Ministers of the Church of Scotland.

1890. *John Hunter, M.A.*

IV.—THE GUNNING VICTORIA JUBILEE LECTURESHIP.

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded a Lectureship in the Faculty of Divinity of the University of Edinburgh, to be known as “The Gunning Victoria Jubilee Lectureship.”

The Gunning Lectureship is a triennial appointment of the value of £100, and the appointment shall be made by the Faculty of Divinity. The Lecturer may be any Scottish Presbyterian clergyman at home, or

in the Mission field, eminent in Science, Philosophy, Language, Antiquity, or Sociology, and the Lectures may be delivered in the University of Edinburgh, or such other place as the Faculty may appoint.

The first appointment will be made at the close of Session 1892-93. See Revised Scheme, p. 519 of CALENDAR 1889-90.

V.—WILLIAM DICKSON TRAVELLING FUND.

This Fund is for the purpose of assisting Graduates of any Faculty, of not more than three years' standing, to travel for the purposes of Study or Research. For particulars, see page 227.

Scholarships, Bursaries, and University Prizes,

OPEN FOR COMPETITION IN THE FACULTY OF DIVINITY DURING THE
ACADEMIC YEAR COMMENCING 1ST OCTOBER 1892.^{1 2}

I. PRESENTATION BURSARIES.

1. *The Penman* (No. III., p. 271).
2. *The Blair* (No. V., p. 271).
3. *The Blair* (No. VI., p. 271).
4. *The Alexander Bursary* (No. IV., p. 271).
5. *The Bayne Bursary* (No. I. p. 275).
6. *The Nairne Bursary* (No. II., p. 275).

II. COMPETITION BURSARIES.

The Bursary Examination at the beginning of Session 1892-93, will be held on Friday, 11th, and Saturday, 12th November, commencing at 10 A.M. each day, when the following Bursaries will be open for competition:—

1. *One Webster Bursary* (No. VIII., p. 272).
2. *One Ettles Bursary* (No. VI., p. 272).
3. *One Thomson Bursary* (No. IX., p. 272).
4. *One Buchanan Bursary* (No. I., p. 272).
5. *The Ramsay Bursary* (No. IV., p. 272).
6. *The Struthers Bursary* (No. II., p. 272).
7. *The Leighton Bursary* (No. III., p. 272).

The subjects of examination for the above, and for *any other ordinary competition Bursary for first year's Students that may be vacant* at the opening of the Session will be—

- (1.) *Latin*—Tacitus' "Agricola," and translation from English into Latin prose.

¹ *Note.*—None of the undernoted Bursaries or Scholarships can be held along with any other Bursary, Fellowship, or Scholarship in any Scottish University. None of the after-mentioned Prizes are subject to this condition.

² The values of the Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c.

- (2.) *Greek*—Euripides' "Alcestis," and Demosthenes' "Philippic," III.
- (3.) *Mathematics*—"Euclid," Books I.-VI.; Algebra and Elementary Trigonometry.
- (4.) *Metaphysics*—Ferrier's "Lectures on Greek Philosophy."
- (5.) *Moral Philosophy*—Sidgwick's "History of Ethics."
- (6.) *Natural Philosophy*—Blaikie's "Elements of Dynamics," and Balfour Stewart's "Elementary Physics."
- (7.) *Hebrew*—Elements of Grammar.
- (8.) *Apologetics*—Flint's "Antitheistic Theories."
- (9.) *Greek Testament*—Acts of the Apostles and Epistle to Romans.

8. *Three Grierson Bursaries* (No. VII., p. 272). Preferential candidates to lodge their applications with the *Clerk of Senatus* on or before 1st November 1892.

The subjects of examination for the Grierson Bursaries, if there be competition, will be:—

For the *first year*—

Same as for ordinary Competition Bursaries, except that *Hebrew*, *Apologetics*, and *Greek Testament* are omitted.

For the *second year*—

- (1.) *Latin*—Lucretius, Book V., and Livy, Book II.
- (2.) *Greek Testament*—Gospel of St Luke, and Catholic Epistles.
- (3.) *Hebrew*—Grammar; Joshua, chapters i.-x. inclusive; Psalms i.-viii. inclusive.
- (4.) *Divinity*—The Trinity; Doctrine of Sin.
- (5.) *Ecclesiastical History*—To 325 A.D.
- (6.) *Biblical Criticism*—Charteris' "Christian Scriptures."

For the *third year*—

- (1.) *Apologetic Theology*—Butler's "Analogy."
- (2.) *Hebrew*—Judges, Amos, Psalms, Book iii.
- (3.) *Ecclesiastical History*—To 325 A.D., and of Scotland, 1500 A.D. to 1600 A.D.
- (4.) *Biblical Criticism*—"Canonicity," pp. 1-23; 53-75.

9, 10. *Two Simson Bursaries* (No. XIII., p. 272).

11. *One Hepburn Bursary* (No. VII., p. 271). Preference given to Gaelic-speaking Students. Subjects of Examination: *Butler's Analogy*, Part I., and *Lightfoot's Epistle to the Philippians*, with the dissertations. For particulars apply to the Rev. Dr Scott, minister of St George's, Edinburgh, or Rev. Dr Langwill, Clerk of the Presbytery of Edinburgh.

12. *The Lockerby Bursary*, of the annual value of about £25, tenable for three years, for which Students of this University "who desire to become ministers of the Church of Scotland only" are eligible, may be open.

13. *A Hepburn Prize* for the best Essay on "The Synod of Dort." The Essay not to exceed fifty pages 4to, and to be handed to Rev. Dr Scott, 16 Rothesay Place, Edinburgh, on or before 1st December 1892. (See No. II., p. 276).

14. *Barty Memorial Prize*, Hebrew and Hellenistic Greek. Competitors to apply to J. W. Barty, Esq., Dunblane.

15. *Vans Dunlop Scholarship in History* (See No. XXXVI., pp. 219 and 223).

At the close of Session 1892-93, the following will be open for competition :—

1. *The Vans Dunlop Scholarship in Hebrew and Oriental (Semitic) Languages* (No. XXXV., pp. 219 and 223).

2. *The Pitt Scholarship* (No. I., p. 277).

3. *The Maxton Scholarship* (No. II., p. 277).

4. *One of the King William Bursaries* (No. V., p. 272). The subjects of examination for this Bursary will be the work of the Session in the Classes of Divinity, Ecclesiastical History, Biblical Criticism, and Junior Hebrew.

5. *A Robert Hunter Bursary* (No. XII., p. 272). Examination as for "King William." These Bursaries cannot be held along with any other Bursary, Scholarship, or Fellowship in any Scottish University.

6. *Two Jeffrey Scholarships* (No. IX., p. 279). One for special excellence in Divinity, and one for special excellence in Hebrew and Oriental Languages. Successful Candidates must attain to a fixed percentage of marks.

The subjects for the Scholarship in Divinity are :—

1. History of Agnosticism.
2. Doctrine of the Person and Work of Christ.
3. Westminster Confession of Faith, chaps. vii.-xi.

The subjects for the Scholarship in Hebrew and Oriental Languages are :—

- (a) *Hebrew*—Subjects prescribed for B.D.
- (b) *Syriac*—Grammar; the Second Gospel (Peshittâ Version), Chaps. i.-viii. inclusive.
- (c) *Arabic*—Socin's Grammar, with the first part of Chrestomathy A; Jacob's Arabic Bible-Chrestomathy; translation into Arabic.

7-16. *Ten Gunning Victoria Jubilee Prizes* (No. III., p. 276).

UNIVERSITY PRIZES.

1. *The Lord Rector's Prize* (No. II., p. 230).

2-4. *Three Gray's Prizes* (No. IV., p. 210).

The examination in the Natural Science series will be on Natural History, Botany, and Geology, and of the same standard as the First B.Sc. Examination in Natural Science.

The examination in the Theological series will be :—

Hebrew—Joshua and Psalms, Book iii., to be known critically.

Divinity—Internal Evidences of Christianity, and the Doctrine of the Trinity.

Ecclesiastical History—The main facts in the Development of the Constitution, Doctrine, and Worship of the Church, from 150 to 323 A.D.

Biblical Criticism—Robertson's Early Religion of Israel ; Canon-icity, Introduction i.-cxx., and Text, pp. 1-41.

William Dickson Travelling Fund (p. 227).

M. C. TAYLOR, D.D.,
Dean of the Faculty of Divinity.

III.

FACULTY OF LAW.

1892-93.

Dean.

PROFESSOR KIRKPATRICK, LL.D.

5 *Murrayfield.*

Programme of Classes.

FACULTY OF LAW.

The Classes in the Faculty of Law will open as follows, and will close on Wednesday, 20th July.

SUMMER SESSION, 1892.

Classes.	Days of Opening, and Hours of Lectures.	Professors.	Class Fees.
Civil Law	12 May, 4 o'clock	Prof. Goudy.....	£5 5 ¹
Constitutional Law } and History.....	12 May, 5 ,,	Prof. Kirkpatrick.	3 3
Scots Law.....	12 May, 9 ,,	Prof. Rankine....	5 5 ¹
Med. Jurisprudence...	2 May, 10 ,,	{ Prof. Sir D. Maclagan.....	4 4

WINTER SESSION, 1892-93.

The Classes in the Faculty of Law will open on Saturday, 15th October, and will close on Saturday, 18th March 1893.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.
Public Law	1 Nov., 3 o'cl.	{ Prof. Sir Ludovic Grant, Bart..	£3 3
Civil Law	17 Oct., 4 ,,	Prof. Goudy.....	5 5 ¹
Scots Law... ..	15 Oct., 9 ,,	Prof. Rankine....	5 5 ¹
Conveyancing.....	15 Oct., 9 ,,	Prof. Wood.....	4 4
Political Economy & } Mercantile Law ... }	21 Oct., 5 ,,	Prof. Nicholson...	3 3
Constitutional Law...	(In Summer Sess.)		3 3
Hist. and Constit. { of U.S.A.	{ 17 Oct., 3 o'cl. ; (Mon., Wed., & Fri.; 20 Lects.)	{ Professor Kirk- patrick	1 1 ²
Med. Jurisprudence...	(In Summer Sess.)	{ Prof. Sir D. Maclagan	4 4
Civil and Crim. Pro- } cedure (Mondays.) }	17 Oct., 5 o'cl. 20 Lectures.	{ Lecturer— John P. Cold- stream, W.S.	1 1 ²
Practical Class } (Wednesdays)	19 Oct., 10.30 to 12.30		3 3 ²

¹ This Fee is paid in Winter, and is for the Winter and Summer Sessions. Second Year's Course, £3, 3s.

² Five Shillings University Entrance Fee for Non-matriculated Students.

Order of Study.

*Extract from Minutes of a Meeting of the Faculty,
20th February 1863.*

The Faculty having taken into consideration that the Course of Study in Law for the Degree of LL.B. extends over three Academical years, and that the natural order in which the various branches of the Course ought to be taken up is often departed from and sometimes altogether inverted—recommend Students, whether intending to graduate in Law or not, to attend the Lectures in the following order, viz. :—

First year—Civil Law ;

Second year—Scots Law ;

Third year—Conveyancing ;

and to attend the Lectures on Public Law, Constitutional Law and Legal History, and Medical Jurisprudence, during the Second and Third years of study, in such order as may be most convenient.

Professorial Courses of Lectures.

1892-93.

I. CIVIL LAW.

PROFESSOR GOUDY, LL.B.

The Course of Lectures on Civil Law extends over a Winter and a Summer Term, covered by one entrance-fee of £5, 5s. The Winter Lectures usually begin on 15th October, and continue until 20th March ; the Summer Lectures usually begin on 12th May, and end on 20th July.

The subject-matter of the Course is the External and Internal History, and the General and Special Doctrines of the Law of

Rome, as developed in the Institutes of Gaius and Justinian, supplemented from the other ante-Justinianian and Justinianian texts.

The Lectures will be equally adapted for students intending to enter the legal profession in Scotland or England, or qualifying for service in India or the Colonies.

Text-Books.—The Institutes of Gaius and Rules of Ulpian, and the Institutes of Justinian.

For preliminary reading students are recommended to consult “*Outlines of the Science of Jurisprudence*,” translated from the Juristic Encyclopædias of Puchta, &c., by W. Hastie; and either Muirhead’s “*Historical Introduction to the Private Law of Rome*” or Ortolan’s “*Histoire de la Législation Romaine*” (of which there is an English translation).

II. SCOTS LAW.

PROFESSOR RANKINE, LL.D.

Students are strongly recommended to make themselves familiar either with Erskine’s “*Principles*” or his “*Institutes*” (edition by J. Badenach Nicolson, Esq., 1871). A new edition (the eighteenth) of the former work is the text-book of the Class.

1. Sketch of the Literature of the Law of Scotland—the sources of the Law—the interpretation of Statutes.

2. Personal Relations—marriage and the modes of proving it—patrimonial effects of Marriage—rights of husband and wife—dissolution of Marriage—divorce—tutors and curators—minors—insane—parent and child—succession—heritable and moveable—wills—trusts.

3. Wrongs—personal injury—defamation—ownership of heritable property—rights and liabilities incident thereto—ownership of moveables—copyright—patents.

4. Obligations and Contracts—general requisites, constitu-

tion, and construction—partnership—joint-stock companies—factory and agency—sale—commodate—pledge—letting to hire—leases—carriers—shipping—insurance—bills of exchange—cautionary—extinction of obligations—diligence—bankruptcy.

5. Parochial Law—burgh and county law—rates and taxes.
6. Law of Evidence.
7. Criminal Law.

Summer Session.

The Lectures on Criminal Law, and part of the lectures on the above subjects, are delivered during the Summer Session.

III. CONVEYANCING.

PROFESSOR WOOD.

The course of Lectures delivered from the Chair of Conveyancing will embrace the following subjects :—

BRANCH FIRST—*Deeds in General.*

1. Requisites as to external form, and the solemnities of execution and authentication.
2. Deeds privileged as regards these solemnities.
3. Delivery and acceptance.

BRANCH SECOND—*Deeds relating to Feudal Rights.*

1. Sketch of the feudal system and its bearing on the existing state of heritable rights in Scotland.
2. The writs constituting a feudal estate, and the respective rights of superior and vassal.
3. The writs used in the voluntary transmission, *inter vivos*, of such estate, and of lands formerly held by burgage tenure.
4. Charters by progress.
5. Services and Destinations.
6. Settlements and Marriage Contracts, so far as relating to heritage.
7. Entails.

BRANCH THIRD—*Miscellaneous Rights relating to Heritable Estate.*

1. Servitudes.
2. Leases.
3. Adjudications and Inhibitions.
4. Sequestrations.
5. Trust Deeds for Creditors.
6. Rights in Security.
7. Practical points on Examination of Title.

BRANCH FOURTH—*Miscellaneous Writs, relating mainly to Moveable Rights.*

1. Submissions. 2. Securities over moveables. 3. Cautioner's Writs. 4. Life Insurance Policies Writs. 5. Discharges. 6. Partnership and Company Deeds. 7. Factories. 8. Negotiable Instruments. 9. Shipping Writs. 10. Wills and Marriage Contracts.

IV.—PUBLIC LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

The Course of Lectures delivered from the Chair of Public Law and the Law of Nature and Nations is divided into two branches :—

1. NATURAL LAW, the Philosophy of Law, or the principles of the science of jurisprudence as a whole.

2. PUBLIC INTERNATIONAL LAW, or the *jus inter gentes*.

The Course for Session 1892-93 will begin on Tuesday, 1st November. The Lectures will be delivered *four* days a-week, and will terminate simultaneously with the other Classes in the Faculty of Law.

Text-Books.—*Natural Law*—Lorimer's Institutes of Law, 2d Edition. Ahrens's Cours de Droit Naturel. Trendelenburg's Naturrecht auf dem Grunde der Ethik. Krause's Rechtsphilosophie (edited by Röder), and Röder's Naturrecht. Maine's Ancient Law. Holland's Jurisprudence.

History.—Wheaton's History of the Law of Nations. Pardessus' Us et Coutumes de la Mer. Lindsay's History of Merchant Shipping. Hosack's Law of Nations. Hertslet's Map of Europe by Treaty.

Public International Law.—Lorimer's Institutes of the Law of Nations. Bluntschli's Modernes Völkerrecht (of which there is a French translation entitled Droit International Codifié). Lawrence's Commentaire sur les Éléments du Droit Inter-

national. Wheaton's Elements of International Law, by Lawrence or Dana. Halleck's International Law. Phillimore's International Law. Hall's International Law. Letters by Historicus. Wharton's International Law Digest. Pitt Cobbett's Select Cases.

V. HISTORY.

PROFESSOR KIRKPATRICK, LL.D., DR JUS.

The Lectures are given in the Summer Session, daily, except Saturdays, at 5 P.M.; and a fortnightly examination is held on Fridays. Prizes are awarded for distinction in the class-examinations, and also for two essays on subjects to be afterwards announced.

Subject—The Constitutional History and Law of England, with occasional reference to the constitutions of other countries.

Students are recommended to consult Stubbs's Select Charters and English Constitutional History; Hallam's Middle Ages, Chap. viii.; Hallam's Constitutional History of England, from the reign of Henry VII. to George II.; Sir Thomas Erskine May's Constitutional History, for the period from the accession of George III.; The Annals of England (Parker, 1876); The English Constitution by W. Bagehot; Guizot's Lectures on Representative Government; R. Gneist's Self-Government in England, 3d Edition, Berlin, 1871; Gneist's Geschichte und heutige Gestalt der Aemter und des Verwaltungsrechts in England, 2d Edition, Berlin, 1866; Gneist's History of the English Constitution, translated by P. A. Ashworth, London, 1886; and Blackstone's Commentaries, Book IV., of Public Rights.

A Course of twenty Lectures on the History and Constitution of the United States of America will begin on 17th October, at 5 P.M. (Mondays, Wednesdays, and Fridays), provided a sufficient number of Students present themselves. (Fee, One Guinea; University Entrance Fee for Non-matriculated Students, 5s.)

VI. MEDICAL JURISPRUDENCE.

PROFESSOR SIR DOUGLAS MACLAGAN.

For Synopsis of this Course, *see* under Faculty of Medicine, No. XII.

VII. COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

For Synopsis of this Course, *see* under Faculty of Arts No. XV.

LECTURESHIP ON PROCEDURE, CIVIL AND CRIMINAL.

LECTURER—JOHN P. COLDSTREAM, W.S.

This course will embrace an enumeration of the various Courts of Scotland, with the nature of their respective jurisdictions, the actions applicable to each, and the details of the procedure in carrying on the suits, whether civil or criminal.

Text-Books.—Mackay's "Practice of the Court of Session;" Coldstream's "Procedure in the Court of Session;" Dove Wilson's "Sheriff-Court Practice in Civil Causes;" Macdonald's "Criminal Law;" Macdonald's "Criminal Procedure (Scotland) Act, 1887."

There is a Practical Class or Laboratory attached to the Class, which meets once a week for two hours, and in which the Student under instruction prepares the writs and pleadings proper to the action raised.

Class Prize Lists.

1891-92.

I.—PUBLIC LAW.

PRIZEMEN.—1. William Chree ; 2. James Grant and Robert Munro—equal.

HONOURS.—4. Alexander M'Callum ; 5. James Barty ; 6. David Maxwell ; 7. J. Purves Smith.

ESSAY.—1. William Chree ; 2. Alexander M'Callum.

L. J. GRANT, BART., B.A., *Professor*.

II.—CIVIL LAW.

WINTER AND SUMMER SESSIONS, 1890-91.

1. Thomas C. Wade, M.A. ; 2. Alex. P. Melville, M.A. ; 3. Robert M. Williamson, M.A. ; 4. A. D. Donald (*Prizemen*) ; 5. Robert Munro, M.A. ; 6. John Cowan, M.A. ; 7. John S. Hepburn ; 8. T. J. Millar, M.A. ; 9. Louis C. Hallard, M.A. ; 10. F. J. Thomson, M.A. ; 11. John W. Pitcairn, M.A. ; 12. John Romanes ; 13. Thomas Trotter ; 14. Maxwell Fleming, M.A. ; 15. Walter J. Robertson, M.A. ; 16. C. R. Gillies Smith, M.A.

HENRY GOUDY, LL.B., *Professor*.

III.—SCOTS LAW.

SUMMER SESSION, 1891.

1. David Marshall, Forfarshire ; 2. Evan J. Cuthbertson, Mid-Lothian ; 3. C. Outram Morris, Ross-shire ; 4. James W. Lowson, Forfarshire (*Prizemen*) ; 5. John Shirley, Mid-Lothian ; 6. C. D. Robson, Forfarshire ; 7. James Hyslop, Kirkcudbrightshire ; 8. John Stuart, Morayshire ; 9. W. D. Robertson, Mid-Lothian ; 10. Thomas Morrison, Fifeshire ; 11. Andrew Grierson, Selkirkshire ; 12. Thomas Aitken, Morayshire ; 13. Wm. Duncan, Mid-Lothian ; 14. James M'Donald, Kirkcudbrightshire ; 15. R. S. Glover, Kirkcudbrightshire ; 16. A. C. Anderson, Forfarshire, and James Kidd, Linlithgowshire—equal ; 18. John S. M'Walter ; 19. John Adam, Forfarshire ; 20. James M'Beth, Perthshire ; 21. John A. Grant, Morayshire ; 22. John Proudfoot, Dumfriesshire.

ESSAY PRIZES.—1. Evan J. Cuthbertson ; 2. James Blacklock and James Hyslop—equal.

WINTER SESSION, 1891-92.

1. A. D. Donald, Forfarshire ; 2. Thomas C. Wade, M.A., Stirlingshire ; 3. Douglas Wilson, Dumfriesshire ; 4. John Maxwell

Young, Aberdeenshire ; 5. Colin Campbell, Inverness-shire ; 6. William Forsyth, M.A., Inverness-shire ; 7. George Moir, Forfarshire ; 8. John D. Wallace, M.A., Inverness-shire (*Prizemen*) ; 9. R. A. Grierson, Dumfriesshire ; 10. John N. Rae, Fife ; 11. James Young, Fife ; 12. David J. Gair, Mid-Lothian ; 13. J. Nicholson, Kent ; 14. Alfred A. Slidders, Forfarshire ; 15. Thomas M. A. Pole, Shetland ; 16. William Grant, Banffshire ; 17. G. M. Crawford, Mid-Lothian ; 18. James Swain Saunders, Aberdeenshire ; 19. Peter Buchanan, Peeblesshire ; 20. Charles R. Beveridge, Forfarshire ; 21. Thomas J. Millar, M.A., Mid-Lothian ; 22. John Romanes, Mid-Lothian ; 23. Alexander P. Melville, M.A., Lanarkshire ; 24. Robert White, Mid-Lothian ; 25. Robert Carmichael, Perthshire ; 26. George A. J. Lee, Mid-Lothian.

JOHN RANKINE, M.A., LL.D., *Professor.*

IV.—CONVEYANCING.

1. C. Outram Morris, Ross-shire ; 2. David Marshall, Forfarshire ; 3. James Watt, Edinburgh ; 4. Thomas Morrison, Fifeshire ; 5. Alexander M'Donald, Edinburgh ; 6. William Motherwell, Lanarkshire ; 7. James Kisson, Kirkcudbright, and William D. Robertson, Edinburgh—equal (*Prizemen*) ; 9. Malcolm Green, Caithness-shire ; 10. John Lorne M'Leod, Inverness-shire ; 11. James Hastie, Lanarkshire ; 12. Evan James Cuthbertson, Mid-Lothian ; George W. Kerr, Dumfriesshire ; and Charles D. Robson, Forfarshire—equal ; 15. Charles A. Macdonald, Inverness-shire ; 16. Clement Wm. Duncan, Banffshire ; Robert S. Glover, Kirkcudbright ; and John S. M'Walter, Forfarshire—equal ; 19. Archibald Wm. Fisher, Roxburghshire ; 20. Alex. Blairford Smith, Forfarshire ; 21. John C. Cantley, Mid-Lothian ; 22. James Rose, Shetland ; 23. Thomas S. H. Burns, Haddingtonshire, and Norman S. Mackay, Edinburgh—equal ; 25. George Macolm Stuart, Edinburgh ; 26. John M. Davidson, Lanarkshire ; 27. John A. Grant, Morayshire ; James Wm. Lowson, Forfarshire ; and Malcolm Muir, Fifeshire—equal ; 30. Thomas Wilson, Berwickshire ; 31. Wm. Martin Whitelaw, Dumfriesshire ; 32. James Barty, Perthshire ; 33. Alexander Ross, Ross-shire ; 34. John Ogilvy Hood, Forfarshire ; 35. J. D. P. Smith, Mid-Lothian ; 36. John Stuart, Elgin ; 37. Francis Lowson, Perthshire ; 38. William Chapel, Forfarshire, and James Kidd, Linlithgowshire—equal ; 40. David Wm. Smith, Wigtownshire ; 41. Robert Wilson, Dumfriesshire ; 42. Alexander Milne, Forfarshire ; 43. John Williamson, Blackadder, Stirlingshire, and Charles Simpson Brown, Kincardineshire—equal ; 45. Thomas Aitken, Morayshire ; 46. John H. Sinclair, Haddingtonshire ; 47. John Rutherford, Liverpool ; 48. Archibald C. Anderson, Forfarshire, and David F.

Mackenzie, Inverness-shire—equal; 50. Michael C. Higgins, Stirlingshire.

JOHN CRAIGIE, M.A., LL.B., *for the Professor.*

V.—CONSTITUTIONAL LAW AND HISTORY.

SUMMER SESSION, 1891.

HIGHEST HONOURS AND PRIZE.—John Taylor Cameron M.A., (second year student.)

ORDINARY HONOURS LIST.—1. Charles Lippe, M.A., and John E. Pickles—equal (*Prizemen*); 3. James Grant, M.A.; 4. A. Murray Marr, M.A.; 5. John Cowan, M.A., and R. C. Malcolm, M.A.—equal; 7. Walter J. Robertson, M.A.; 8. Peter Campbell and William G. Wedderspoon, M.A.—equal; 10. R. J. Cunningham, M.A.; George Morton, M.A., and William D. Ritchie, M.A.—equal.

ESSAY HONOURS LIST.—1. Walter J. Robertson, M.A.; 2. William G. Wedderspoon, M.A. (*Prizemen*); 3. John E. Pickles; 4. Charles Lippe, M.A.; 5. George Morton, M.A., and William D. Ritchie, M.A.—equal.

HONOURABLE MENTION (for Examinations and Essays.)—J. G. B. Henderson, M.A.

JOHN KIRKPATRICK, LL.B., LL.D., *Professor.*

VI.—MEDICAL JURISPRUDENCE.

FIRST-CLASS HONOURS.—1. James M'Robie, M.A. (*Medallist*).

SECOND-CLASS HONOURS.—2. W. G. Manson; 3. John M. Davidson; 4. Charles A. M'Inroy.

DOUGLAS MACLAGAN, KT., M.D., LL.D., *Professor.*

VII.—COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

PRIZES AND HONOURS CERTIFICATES.—1. F. Spence, M.A., Northumberland (*Medal and Merchant Company's Prize of £10, 10s.*); 2. W. G. Wedderspoon, M.A., Edinburgh (*George Watson's Prize*); 3. W. B. Heddle, M.A., Orkney (*Daniel Stewart's Prize*); 4. G. M. Gibb, M.A., Edinburgh; 5. J. L. Linton, M.A., Edinburgh; 6. R. H. K. Clark, St Andrews; 7. W. M. Budge, M.A., Caithness; 8. J. Ferrier, Edinburgh.

ESSAYS.—(*Prizemen*)—1. F. Spence, M.A.; 2. R. H. K. Clark.

J. SHIELD NICHOLSON, D.Sc., *Professor.*

CIVIL AND CRIMINAL PROCEDURE.

FIRST-PRIZE AND FIRST-CLASS HONOURS.—1. T. C. Hunter, Edinburgh.

SECOND PRIZE AND SECOND-CLASS HONOURS.—2. R. W. Gardiner, Edinburgh.

SECOND-CLASS HONOURS.—3. J. W. Gulland, Mid-Lothian; 4. William Motherwell, Mid-Lothian.

JOHN P. COLDSTREAM, W.S., *Lecturer.*

Graduation in Law.

DEGREES OF BACHELOR OF LAWS (LL.B.) AND BACHELOR OF LAW (B.L.).

Two Degrees in Law are conferred upon Examination in the University of Edinburgh, viz., Bachelor of Law (B.L.) and Bachelor of Laws (LL.B.).

Either of these Degrees admits to the Profession of Law Agent, provided an Examination in the Practice of the Courts is passed to the satisfaction of the Examiners under the Law Agents Act.

The Degree of LL.B. admits to the Profession of Advocate without further examination.

Either Degree qualifies for admission to the General Council of the University.

Candidates for the Degree of LL.B. must be graduates in Arts of a Scottish, English, or Irish University, or of some other University approved of by the Senatus and the University Court.

Candidates for the Degree of B.L. need not be graduates in Arts; but, if not, they must have attended one or more Arts classes during one academical year in a British, Irish, or other recognised University, and must pass a Preliminary Examination in general knowledge according to the Regulations after stated.

Candidates with the necessary qualifications for either Degree, may present themselves for Examination in any number, not less than two, of the subjects prescribed, and they may present themselves on one or more subsequent occasions for examination in the remaining subjects; but on each occasion they must pass in two subjects at least. Two Law Graduation Examinations are held annually, the first beginning on the first Monday in July, and the second on the last Monday in October.

Candidates must enter their names and addresses at the office of the Clerk of Senatus, exhibit the necessary certificates, and pay the required fee, at least one week before the first day of the Examination.¹

The Degree of Bachelor of Laws was instituted by an Ordinance of the Universities' Commissioners, dated 12th July 1862. The

¹ When names are not entered, and fees paid, on or before the stated dates, a late-entry fee of ten shillings must be paid before the candidate can be admitted to examination. A candidate is not held to be entered for the examination until his name is entered, the fee paid, and all the necessary certificates, &c., lodged.

Degree of Bachelor of Law (B.L.), was instituted by the University, and approved by Her Majesty by Order in Council, dated 6th August 1874.

The rules of the Ordinance, as amended by an Order in Council of 11th August 1884, are—

I. No one shall hereafter be admitted as a candidate for the Degree of Bachelor of Laws (LL.B.) . . . unless he be a Graduate in Arts of one of the Universities of Scotland, or of England or Ireland, or a Graduate in Arts of a colonial¹ or foreign University, whose Degree may, for this purpose, have been specially recognised by the University Court.

II. The Course of Study in Law necessary for the Degree of Bachelor of Laws shall extend over three Academical years, and shall include attendance on a Distinct Course in each of the six following Departments, viz. :—

- | | |
|---|---|
| 1. CIVIL LAW..... | } During Courses of not less than Eighty Lectures each. |
| 2. LAW OF SCOTLAND..... | |
| 3. CONVEYANCING, or, in the option of the Candidate, POLITICAL ECONOMY ² | |
| 4. PUBLIC LAW | } During Courses of not less than Forty Lectures each. |
| 5. CONSTITUTIONAL LAW and HISTORY | |
| 6. MEDICAL JURISPRUDENCE ³ | |

III. No one shall hereafter be admitted to Examination as a candidate for the Degree of Bachelor of Laws, until he has completed the course of study above prescribed; and no one shall be admitted as a candidate in any University unless two at least of the three Academical years of his course of study in Law shall have been in such University.

IV. Candidates for the Degree of Bachelor of Laws shall be examined, both in writing and *viva voce*, on each of the six Departments of Law above specified.

V. Each candidate must satisfy the Examiners that he possesses a competent knowledge of Law in each of the said Departments; and the Examiners shall further, in judging of the qualifications of candidates, have special regard to their acquirements in the two Departments of Public Law and Constitutional Law and History.

* * * * *

¹ The following Degrees have been recognised in terms of this Section: B.A. of New Zealand University; B.A. of Cape of Good Hope University; B.A. of Dalhousie University, Halifax, Nova Scotia.

² This option, initiated by the Faculty of Law, was approved by Her Majesty by Order in Council on 11th August 1884. Conveyancing, however, continues to be compulsory, both as to attendance and examination, for candidates who desire their LL.B. degree to qualify them for the profession of a law-agent; and it continues compulsory as to attendance for candidates for the Bar.

³ For names of authorised extra-academical lecturers, see page 380.

IX. Each candidate for the Degree of Bachelor of Laws shall pay a Fee of Five Guineas in respect of his Examination for the Degree.¹

The Rules of the Order in Council of 6th August 1874 sanctioning the Degree of B.L., are as follows :—

XII. No one shall be admitted to Examination as a Candidate for the Degree of Bachelor of Law in the University of Edinburgh, unless he be a Graduate in Arts, qualified as prescribed in Section I. (of the Regulations for LL.B.), or unless he shall have studied in one of the Universities therein mentioned, during at least one Academical year, one or more of the subjects included in the course of Study in the Faculty of Arts, and shall have passed a satisfactory Examination in (1.) Latin, (2.) Greek, French, or German, and (3.) any two of the following subjects—namely, Logic, Moral Philosophy, and Mathematics. The Examinations shall be conducted by Examiners in Arts, together with some of the Law Examiners.²

XIII. The course of study in Law necessary for the Degree of Bachelor of Law in the University of Edinburgh shall extend over at least two Academical years, and shall include attendance on a distinct course, as specified in Section II. (of the Regulations for LL.B.), in each of the first three of the Departments therein mentioned,³ and in any one of the other three Departments; and no one shall be admitted to Examination as a Candidate for the said Degree, unless two Academical years of his course of Study in Law shall have been in the University of Edinburgh.

XIV. The Examination for the said Degree of Bachelor of Law in the University of Edinburgh shall be conducted at the same time, and in the same manner, as that for the Degree of Bachelor of Laws, and the Candidates shall be examined in each of the Departments of Law on which they shall have given attendance, as above required.

* * * * *

XVI. The Fee to be paid by each Candidate for the Degree of Bachelor of Law in the University of Edinburgh shall be the same as is provided by Section IX., with reference to Examinations for the Degree of Bachelor of Laws.⁴

¹ If the Examination is taken in two or more parts, the fee for the first is £3 3s., and for the second, £2, 2s., no fee being payable in respect of any Examination after the second.—Every Candidate for a Degree in Law must matriculate at the University for the year in which he appears for Examination or for Graduation. He must enter his name for graduation, and if not already a member of the General Council, must also pay the fee of £1 for Registration at least two clear days before the date of graduation.

² Candidates must pass in these subjects at the Ordinary Examinations for the Degree of M.A. in April and October (*see REGULATIONS FOR GRADUATION IN ARTS*).

³ *Viz.*, Civil Law, Scots Law, and Conveyancing: the option of Political Economy not applying to the B.L. degree.

⁴ For Preliminary Examination in Arts, £1, 1s.; for First Examination in Law, £2, 2s.; for Second Examination in Law, £2, 2s. No fee is payable in respect of any Examination after the Second Examination in Law.

SUBJECTS OF EXAMINATION.

PRELIMINARY EXAMINATION FOR DEGREE OF B.L.¹

The following Books are prescribed for French and German :—

FRENCH.—*Montesquieu's* Esprit des Lois, Books xi. to xiii. *Voltaire's* Charles XII. *Molière's* L'Avare. *Victor Hugo*: First Division of Selections ('Poésie') contained in L'Œuvre Complète de Victor Hugo (Extraits); Paris, Hetzel-Quantin, 1885. Some knowledge of the matter of the books prescribed as well as of their text is required. A passage from a work not prescribed may also be set. Moderate proficiency in French prose composition is required. Questions on French Grammar, Philology, and History will also be set. For these subjects reference may be made to *Saintsbury's* Primer of French Literature, to *Brachet's* Historical French Grammar, or *Clapin's* Primer of French Philology, and to *Charlotte Yonge's* Primer of French History.

GERMAN.—*Von Jhering*, Der Kampf um's Recht. *Lessing*, Minna von Barnhelm. *Goethe*, Hermann und Dorothea, Cantos I. and II. *Schiller*, Die Glocke. *E. J. A. Hoffmann*, Meister Martin (Lange's German Classics). Translation, composition, and some grammatical and historical knowledge will be required, as in French. Reference may be made to *Ravensberg's* German Grammar, *Selss's* Outline of the Literature of Germany, and *Sime's* History of Germany (Macmillan's Hist. Course for Schools).

LAW EXAMINATION (FOR DEGREES OF LL.B. AND B.L.).

In PUBLIC LAW the subjects will be *Natural Law* and *Public International Law*. The books recommended for study are mentioned in the Synopsis of the Professor's Lectures in the CALENDAR.

In CIVIL LAW the examination for both degrees will be on the History of the Law of Rome, and on its Principles as explained in the Institutes of Gaius and Justinian. Candidates for LL.B. will also be examined on Book xviii., tit. 1, and Book xlv., tit. 1, of the Digest. The works of Professor Muirhead are recommended to candidates.

In CONSTITUTIONAL LAW AND HISTORY the subjects will be—(1) The Constitutional History of England from the Union of the Crowns to the first Reform Act. (2) The Constitution, Powers, and Privileges of Parliament from 1295 to 1885.

In the LAW OF SCOTLAND the subject will be the Municipal Civil Law. The works of Mr Erskine and Mr G. J. Bell in the latest editions are recommended to candidates.

In CONVEYANCING the subject of Examination will be the Constitution of Heritable Rights, irredeemable and redeemable, and their Transmission *inter vivos* and *mortis causâ*.

¹ The books, &c., prescribed for the Preliminary Examination for 1892-93, are subject to changes which the Universities Commissioners may make by Ordinance. It is not expected, however, that any compulsory change will be made before the beginning of the Academic year 1893-94.

In MEDICAL JURISPRUDENCE the subjects will be—(1) Corrosive Poisons ; (2) Wounds ; (3) Infanticide ; (4) Death from Asphyxia ; (5) Testamentary Capacity.

In POLITICAL ECONOMY¹ the Examination will be on the subjects treated of in Mr J. S. Mill's "Principles of Political Economy." Candidates will also be expected to show some knowledge of the works of the recent writers mentioned in the Synopsis of the Professor's Lectures.

DATES OF EXAMINATIONS.

PRELIMINARY EXAMINATION FOR B.L. (1892-93).

11th October and 3rd April—Latin, 9 and 11.30.

12th October and 4th April—Greek, French, and German, 11.30 and 2.30.

13th October and 5th April—Logic, 9.

14th October and 6th April—Moral Philosophy, 9.

11th October—Mathematics, 2.30 ; 12th October, 9 ; 3rd April, 3 ; and 4th April, 9.

Names to be given in, and fees paid, on or before 4th October and 17th March, for the Examinations in October and March respectively.

LAW EXAMINATIONS (1892).

4th July and 31st October—Scots Law, 10 ; Constitutional Law and History, 3.

5th July and 1st November—Civil Law, 10 ; Constitutional Law and History, 3.

6th July and 2nd November—Conveyancing, 10 ; Political Economy, 10 ; Medical Jurisprudence, 3.

7th July and 3rd November—Public Law, 10.

Oral Examinations on 11th July and 7th November.

Names to be given in, certificates shown, and fees paid, on or before 27th June and 24th October, for the Examinations in July and October respectively.

¹ Optional instead of Conveyancing ; but see *supra*, footnotes, pp. 298, 299.

Examination Papers for Degrees in Law.

B.L. PRELIMINARY EXAMINATION.

FRENCH.

Wednesday, 15th October 1891.—11.30 to 1.30 o'clock.

FIRST PAPER.

Translate into English, and answer questions on any three of the following passages:—

I. Montesquieu, *L'Esprit des Loïs*, livre xii. chap. vi., from “Je dirai bien que le crime contre nature,” to “à des satisfactions plus grandes que ces délices mêmes.

1. Give third singular and plural, present indicative and past definite of *dirai*, *fera*, *verra*.
2. *De grands progrès*. Why not *des*?
3. Give third plural, past definite, future, and present subjunctive of *peuvent*, *proscrive*, *repandre*.
4. *Que l'on ne prépare point—et l'on verra*. Explain the use of the article in these clauses, and state in what other cases it is similarly used.
5. Give the masculine of *douce*.
6. *En comblant*. Are any other prepositions construed in this way? What other form of the verb is generally used after them?

II. Voltaire, *Charles XII.*, book ii., from “Le plus considérable de ses partisans, et le plus dangereux ennemi qu'eût le roi de Pologne,” to “mais le torrent de la haine qu'on portait au père, tout grand homme qu'il était, en écarta le fils.”

1. *Le plus dangereux ennemi qu'eût le roi*. Account for the mood of the verb.
2. *Laquelle ne cessait*. Account for the form of the negative, and state in what other cases it is used.
3. *Jean Sobieski, prédécesseur d'Auguste*. Why not *le prédécesseur*?
4. *Obtint, ouvrit*. Third singular and plural present, imperfect, and future, and the present and past participles.
5. *À celle*. Give the masculine, singular and plural, of this.
6. *Entreprendre, mettre*. Third singular and plural, present, past definite, and future.
7. *La haine qu'on portait*. Put the verb of the relative clause in the pluperfect.

III. Molière, *L'Avare*, iv. 1, from “*Cléante*. Que veux-tu? c'est

ma mauvaise destinée qui l'a voulu ainsi," to "Elle m'a toujours élevée avec une tendresse extrême, et je ne saurais me résoudre à lui donner du déplaisir."

1. *Veux, faire, voi, puis.* Second person singular and plural, past definite, future, and imperative.
2. *Agissante.* When is the present participle variable?
3. *Saurais, mettez, voyez, remets, croi.* Third singular and plural, present, past definite, and future.
4. *Mettez-vous.* Put this negatively, and give the singular, both positively and negatively.
5. *Exiger, renvoyer.* Second singular and plural, past definite, and future.
6. *Elevée.* Account for the form of the past participle.
7. Note any archaisms of spelling or expression that occur to you in the above passage.

IV. Victor Hugo, *Extraits*, p. 47, from "Enfants ! oh ! revenez ! Tout à l'heure, imprudent," to "on peut voir des lumières courir dans les maisons le soir."

1. *Exilés, restés.* Account for the form of the participle.
2. *Du Japon.* Why not *de Japon*? Mention some other names of countries treated similarly.
3. *Quel, vieux, beau.* Give the feminine of these.
4. *Quelques.* In what case is *quelque* invariable; and when do you write it *quel que*?
5. *Vers.* What different meanings attach to this word?
6. *Eclore.* What forms are used of this verb?

SECOND PAPER.—2.30 to 4.30 o'clock.

I. Translate into French :—

The king, wild with rage, went straight to the tent of the Grand Vizier, and reproached him with the treaty he had just concluded. "I have a right," said the Grand Vizier, with a calm air, "to make either peace or war." "But," asked the king, "hadst thou not the whole Russian army in thy power?" "Our law commands us," the Vizier gravely replied, "to grant peace to our enemies when they implore our mercy." "And does it command thee," resumed the king, in a passion, "to make a bad treaty, when thou canst impose whatever laws thou pleasest? Did it not lie in thy power to lead the Czar a prisoner to Constantinople?" The Turk, driven to extremities, replied drily, "And who would govern his empire in his absence? It is not proper that all kings should be away from home." Charles's sole answer to the Vizier's allusion to his roving habits was a smile of indignation. He threw himself on a sofa, and looking at the Vizier with an air of contempt, he stretched out his leg, and purposely entangling (embarrasser) his spur in the Turk's robe, tore it. He then immediately remounted his horse, and returned to Bender with despair in his heart.

- II. (a) Give some account of the events during the reign of either Francis I. or Louis XVI.
 (b) Mention three dramatic writers, three novelists, and three lyrical poets; and enumerate some of their works.
 (c) Give the derivation of any ten of the following words:—*noir, blanc, oiseau, oie, frais, cheval, bois, car, quoi, monter, mon, mettre, midi, soir, aujourd'hui.*

5th April 1892.—11.30 to 1.30 o'clock.

FIRST PAPER.

Translate into English, and answer questions on any three of the following passages:—

I. Montesquieu, *Esprit des Loix*, xiii. 17; from "Une maladie nouvelle s'est répandue en Europe" to "c'est-à-dire presque toujours à perdre leur argent."

1. (*s'est répandue*). Put this (a) negatively, (b) interrogatively; and account for the form of the participle.
2. (*en Europe*). Translate "in northern Europe;" and give some names of countries with which "in" is not translated by "en."
3. (*leur fait entretenir*). Explain the use of "leur" in this connection, and give the respective singular pronoun, masculine and feminine.
4. (*fait—devient—appelle—tient*). Give 3rd singular and plural imperfect, past definite, past indefinite, and future.
5. (*pourroit—étoient—auroient—vivre*). 3rd singular and plural present, past definite, and present subjunctive.
6. (*cet—cette—tout*). Give the respective plurals.
7. (*Aussi l'Europe est-elle*). Account for this inversion, and mention other cases where it takes place.

II. Molière, *L'Avare*, iii. 5; from "*Maitre Jacques. Monsieur, puisque vous le voulez, je vous dirai franchement*" to "*où l'on ne vous entend accomoder de toutes pièces.*"

1. (*puisque*). Give one or two synonyms of this conjunction.
2. (*voulez—dirai—jette*). 2nd singular and plural present, imperfect, past definite.
3. (*de vous—qu'on nous jette*). Give the singular of *vous* and *nous*, as applicable to these cases.
4. (*tenir—faire—obliger*). Give 1st singular and plural present, past definite, future.
5. (*toute prête*). Account for the form of *toute*.
6. (*de leur sortit*). State rule regarding the treatment of adjectives in *eur* in forming the feminine.
7. (*celui-ci—votre*). Give the plural, masculine and feminine.
8. (*l'on*). When is the article used with *on*, and account for it etymologically.

III. Voltaire, *Histoire de Charles XII.*, Book III., from “Les Russes vainquirent ce jour-là les Suédois en bataille rangée,” to “ce qui peut-être n’était jamais arrivé qu’ à lui.”

1. (*vainquirent*). 3rd singular present, imperfect, past definite, past indefinite, future, imperfect subjunctive.
2. (*malgré lui*). Put this in the feminine, and in the plural masculine and feminine.
3. (*dans Varsovie*). Account for “dans.” What preposition would be ordinarily used?
4. (*recevoir—reconnaître—aller*). 3rd singular and plural present, past definite, past indefinite, and future.
5. (*ravagée*). When does the past participle take the signs of the feminine and plural?
6. (*il fallait—appris*). 3rd singular present, past definite, past indefinite, future, present subjunctive.

IV. Victor Hugo, *Extraits*, p. 108; from “Donc, à l’heure où les feux du soleil sont calmants” to “Et c’est un astre, ayant de plus la petitesse.”

1. (*calmants—tremblante*). State rule as to the treatment of the present participle.
2. (*se recueille—se taisent—dormir—servir*). 3rd singular present, imperfect, past definite, past indefinite, future.
3. (*se repose*). 2nd singular and plural pluperfect and imperative, (a) positively, (b) negatively.
4. (*croit—voir—rit—sent—fuir*). 3rd singular and plural present, past definite, past indefinite, and future.
5. (*en la voyant*). Is this the verb-form generally used with prepositions? Translate “without seeing, for seeing.”
6. (*frais*). Give the feminine, as also of *beau*, *bas*, *vieux*, *sec*, *gentil*, *favori*.

5th April 1892.—2.30 to 4.30 o’clock.

SECOND PAPER.

I. Translate into French:—

Augustus thought it better to accept hard laws from his conqueror than from his own subjects. He resolved to sue for peace to the king of Sweden; and wished to conclude a secret treaty with him. He was obliged to conceal this step from the Senate whom he considered as an enemy even more untractable than Charles. As the affair was of a delicate nature, he entrusted it to the Countess of Königsmark, a Swedish lady of high birth, to whom he was at that time attached: it is she whose brother is known by his unfortunate death, and whose son commanded the armies in France with so much glory and success. This woman, celebrated for her wit and beauty, was indeed more capable than any minister of bringing a negotiation

to a happy issue. Moreover, as she had some property in the kingdom of Charles XII., and had resided a long time at his court, she had a plausible pretext for waiting upon the king. Accordingly she came to the Swedish camp in Lithuania, and applied at once to Count Piper, who too readily promised her an audience of his master. The Countess, among those perfections which rendered her one of the most amiable women in Europe, possessed the rare talent of speaking the language of several countries she had never seen, with as much ease as if she had been born there.

- II. 1. Give some account either of The Fronde and of Bayard, or of the principal events during the reign of Louis XV.
2. Give brief accounts of any three of the following writers:—Rabelais, Rousseau, Chateaubriand, Boileau, Lamartine.
3. Give the derivation of any ten of the following words:—*écouter, ouir, ouvrir, ouvrage, église, façon, aller, août, déjà, eau, rouge, blâmer, fromage, jamais, le.*

EXAMINATION PAPERS FOR LL.B. AND B.L.

SCOTS LAW.

Monday, 6th July 1891.—10 to 2 o'clock.

Three Questions only of each Group to be answered.)

I.

1. Wherein did the Married Women's Property Act of 1881 alter the law?
2. A dies intestate survived by his father, one son of a deceased elder brother, two sons of a deceased younger brother, and three sons of a deceased sister. His succession consists of a small heritable property and large movable estate. How is it divisible in law? Is collation competent?
3. What is meant by the rule that trustees should not be *auctores in rem suam*? If the rule be contravened, what are the remedies?
4. What legacies are presumed to be cumulative, and what substitutionary?

II.

1. What are the rights *inter se* of (1) opposite riparian proprietors, and (2) opposite salmon fishery proprietors, on a non-navigable stream?
2. What are the main points to be looked to in determining whether a fixture is heritable or movable, as between heir and executor? Give examples.
3. What rules govern the acquisition and loss of a settlement in the sense of the Poor Law?
4. What are the scope and purpose of an action of poinding of the ground?

III.

1. Explain the effect upon a written contract of verbal agreements regarding its subject-matter entered into (1) before or (2) after its date.
2. What are the contents of the Memorandum of a Association of Limited Liability Company, and how may they be altered?
3. What are the implied conditions as to quality in a contract of sale of goods?
4. Explain the general nature of *negotiorum gestio* and the rights and obligations of parties arising therefrom.

IV.

1. What is the liability of the owner of a dog or other animal for personal injuries caused by it?
2. Describe the form and functions of a bill of lading. What effect has an indorsation thereof on stoppage *in transitu*?
3. Explain and illustrate the doctrine of *tantum et tale* in bankruptcy?
4. Explain briefly the following terms:—Expiry of the legal, stillicide, heir female, dead freight, cesser clause, *novum debitum*.

CONSTITUTIONAL LAW AND HISTORY.

FIRST PAPER.

Monday, 6th July 1891.—3 to 5 o'clock.

(Six Questions only to be answered.)

1. "In 1711, in order to obtain a majority in the House of Lords, the Government creates twelve new peers." "A Peerage Bill is passed by the House of Lords in 1719." Explain and discuss.
2. What is meant by "Cabinet Government"? Trace the history of its establishment.
3. Sketch in outline the character and the policy of George III., with a few illustrations.
4. Trace and discuss the causes of the American Revolution from 1764 to 1776.
5. On what grounds are the administrations of William Pitt (1784 to 1801, and 1804 to 1806) extolled? Contrast them briefly with their immediate predecessor.
6. Sketch the history of Catholic Emancipation from 1778 to 1829, inclusively.
7. The Test and Corporation Acts were repealed in 1828. What was their nature? Trace their history, and state what classes of the community they affected.
8. Write short sketches of any *three* of—Walpole, Pulteney, the elder Pitt, Burke, Wilkes, the younger Pitt, Canning—stating the points for which they are chiefly memorable.

SECOND PAPER.

Tuesday, 7th July 1891.—3 to 5 o'clock.

(Six Questions only to be answered.)

1. Describe briefly the (a) Composition, (b) Business, (c) Character of writs summoning it, and (d) Prototypes of the Parliament of 1295.
2. Trace in outline the progress of Parliament in the reign of Edward III. (1327-77).
3. What important Election Statutes were passed in 1406, 1410, 1413, 1430, 1432, and 1445? Explain their objects and effect.
4. Enumerate and explain the powers and privileges of Parliament as at the close of the Lancastrian Dynasty.
5. Give the substance of (a) the Apology, (b) the Protestation, (c) the Petition of Right, (d) the Grand Remonstrance, and explain the circumstances under which they were passed.
6. What rules have been laid down since the time of the Lords Ordainers as to the frequency and duration of Parliaments?
7. State and discuss shortly any three of the following cases—Haxey, Thorpe, Strode, Ferrers, Goodwin, Sir John Eliot.
8. State fully the Aylesbury Election Case, and explain the principles involved.
9. State briefly the nature of the parliamentary reforms of 1832, 1867, and 1884.

ROMAN LAW.

Tuesday, 7th July 1891.—10 to 2 o'clock.

Candidates for LL.B., or for B.L. on the LL.B. standard, are expected to answer five of the Questions in Group I., and three in each of the other Groups.

Candidates for B.L. not aiming at the LL.B. standard are expected to answer two of the Questions in Group I., and three in each of Groups II., III., and IV., but need not answer any in Group V.

Group I.

1. Give a short account of the *codex vetus* and *codex repetitæ prælectionis* of Justinian. What was the "Basilica"?
2. Give a sketch of the law of Wills under the old *jus civile*.
3. Explain the distinction between the schools of the Proculians and Sabinians. Give a short account of the life and writings of Gaius.
4. What were the main provisions of (1) the *lex Ælia Sentia*, (2) the *lex Papia Poppæa*, (3) the *lex Hortensia*?
5. Who were the *nexi*? How was their condition ameliorated by legislation?
6. Explain the *legis actio sacramento*.

Group II.

7. "Servile caput nullum jus habet." Criticise this maxim of Paul. Mention some matters in which the condition of slaves was ameliorated in the later law. How was *legitima manumissio* effected?

8. What were the conditions of *justae nuptiae* under Justinian's legislation?

9. Distinguish between *tutela legitima*, *testamentaria*, and *Atiliana*. Mention two or three grounds on which tutors might be excused from accepting office.

10. How was adoption of a *filiusfamilias* effected in the time of Gaius and Justinian respectively?

Group III.

11. What things might be acquired by *Occupatio*? What was *Specificatio*?

12. Write a note upon the *dos* of a married woman, mentioning how it was constituted, what were the various kinds of it, and what were the rights of the husband in it at the dissolution of the marriage?

13. Could there be a usufruct of money? If so, explain how it was effected?

14. Explain the following phrases:—"Heres ex asse," "Bonorum Possessio sine re," "Dies cedit," "Semel heres, semper heres."

Group IV.

15. What were the points of distinction between *legata* and *fidei-commissa*? What was the *Senatus Consultum Pegasianum*?

16. Explain the chief incidents in the Law of Sale in the time of Justinian?

17. To what extent could pupils and lunatics incur obligations?

18. Explain the nature of the actions "tributoria," "exercitoria," and "quod jussu."

Group V.

19. Translate:—

"Si id quod aurum putabam, cum aes esset, stipulatus de te fuero, teneberis mihi hujus aeris nomine, quoniam in corpore consenserimus: sed et ex doli mali clausula tecum agam, si sciens me fefelleris." (D. xlv. i., fr. 22). What was meant by "*doli clausula*"? How was it expressed in the *Formula*?

20. Translate:—

"Multum interest, utrum ego stipuler rem cujus commercium habere non possum, an quis promittat: si stipuler rem cujus commercium non habeo, inutilem esse stipulationem placet: si quis promittat, cujus non commercium habet, ipsi nocere, non mihi." (D. xlv. i., fr. 34).

21. Translate:—

“Lucius Titius promisit de fundo suo centum milia modiorum frumenti annua præstare prædiis Gaii Seii: postea Lucius Titius vendidit fundum additis verbis his: ‘quo jure quaque conditione ea prædia Lucii Titii hodie sunt, ita veneunt itaque habebuntur’: quæro, an emptor Gaio Seio ad præstationem frumenti sit obnoxius.” (D. xviii. i., fr. 81, § 1). What answer should be given to the above question? Give your reasons.

CONVEYANCING.

Wednesday, 8th July 1891.—10 to 2 o'clock.

(Twelve Questions only to be answered, including Nos. 7, 8, 9, 11, 13, and 14.)

1. State in detail what in early feudal times constituted “proper” and what “improper” investiture, and give an example of a modern form of procedure in which the former may still be traced.

2. Give a brief account of “Ward-Holding” and its casualties. When was the tenure abolished, and what became of the lands held under it?

3. A, infest and entered in lands held of the Crown, disposed them *a me vel de me* to B. B, infest but unentered, died intestate, and was succeeded by C. State in detail how C would have made up a complete title to them (1) prior to the Lands Transference Act of 1847, and (2) in 1867.

4. What is generally necessary to constitute a valid contract of sale of heritage? State any exceptions to the general rule, and the effect of a stipulation in the contract that the purchaser shall take the title as it stands.

5. A who was infest, but unentered, in lands held feu agreed by missives of sale in 1845 to sell them to O, but died before granting a conveyance, and B his heir refused to carry out the contract. State in detail the steps which O would require to have taken at that date to obtain a complete title to the lands, explaining the effect of each step. What would be the procedure now?

6. What is required to constitute a right (1) of salmon fishing and (2) of sea-ware? (3) How, as regards the latter, are the limits within which coterminous proprietors can exercise their respective rights ascertained?

7. A infest feued to C, C infest, conveyed to D, D uninfest reconveyed to A, who died intestate without having taken infestment on the reconveyance. State the steps by which B, the heir of A, would have completed a title and reunited the estates (1) in 1870, and (2) in 1890.

8. A disposed *mortis causa* thus: “Failing heirs of my body I dispoine my lands of X to B and the heirs of his body, whom failing, to

C, and I dispoſe my lands of Z to the heirs of my body, whom failing, to B and the heirs of his body, whom failing, to C."

B predeceased A, leaving a son E, A then died, leaving a posthumous son O, who died in infancy. A competition for the respective estates having arisen between P, the heir-at-law of O, and E, the son of B, which of them will prevail, for what reason, and how will he or they complete their titles?

9. A diſpoſed lands held feu by delivered deed in favour of his daughter "B in liferent, for liferent only, and to her ſons C and D, and any children yet to be born to her, in fee," and ſhe took infeſtment in theſe terms. C died unmarried and inteſtate. D then died inteſtate in 1871, leaving a ſon X. B, the liferentrix, died in 1873, leaving another ſon E and a daughter F. How would the property *at the latter date* have been divided, and by what ſteps would the titles of the parties intereſted therein have been completed?

10. Deſcribe the object and form of ſervice *cum beneficio inventarii*, and ſtate what alterations in regard to the form or to the neceſſity for ſuch procedure were made by the Service of Heirs Act, 1847, and the Conveyancing Act, 1874, reſpectively.

11. Explain the effect of (1) the "*conditio ſi ſine liberis teſtator deceſſerit*" and that of "*ſi ſine liberis inſtitutus deceſſerit*," and illuſtrate your answer by examples ſhowing where the doctrines would or would not apply.

12. What is the object and effect of the employment of the Absolute Diſpoſition qualified by a back-bond as a ſecurity for debt? and to what extent can the creditor duly infeſt under ſuch a deed make uſe of the diligence of "poinding the ground"? Give the reaſon.

13. A, the creditor duly infeſt under a bond and diſpoſition in ſecurity taken to him "and his heirs and aſſignees," died inteſtate, by what ſteps, at theſe reſpective dates, would or could his ſucceſſor B have made up a title according as death had taken place in 1860 or in 1890?

14. A held the lands of X under a deſtination in his marriage-contract to him, "A, and the heirs-male of his body," and the lands of Z under the deſtination in a deed of entail in the ſame terms, A having been infeſt in both deeds, and the latter deed having been recorded in the Register of Entails. B, A's ſon, on his father's death, diſregarding the deſtinations, made up a title to both eſtates as heir of the inveſtiture, and was duly infeſt therein. To what extent and from what date will preſcription operate ſo as to validate the titles thus made up? Give the reaſon.

15. An heir of entail duly infeſt, being deſirous of borrowing on ſecurity of the eſtate, by what ſteps would he uſually do ſo, ſuppoſing that the deſtination is not exhausted. (2) Assuming that he had not borrowed on ſecurity of the eſtate, but had contracted ordinary unſecured debts, by what ſteps and to what extent, if any, can his creditors make the eſtate available for payment of their claims?

MEDICAL JURISPRUDENCE.

*Wednesday, 8th July 1891.—3 to 5 o'clock.*I.—*Corrosive Poison.*

1. State the general characters in point of action which differentiate between corrosive and irritant poisons.
2. Give two examples of each class, stating the scientific and popular names of the poisons neglected.

II.—*Wounds.*

1. What are the general characters of an incised wound?
2. What is the principal source of danger to life from an incised wound.
3. Describe one of the methods of detecting blood on an article of dress, such as a white shirt.

III.—*Infanticide.*

1. What is meant by the expression "live birth"?
2. What are the means by which the reality of live birth can be proved?

IV.—*Electricity.*

1. What appearances may be seen on the body of a person killed by lightning?
2. Under what circumstances may death be caused by electricity, irrespective of thunderstorms?

V.—*Homicidal Mania.*

1. State briefly what has been laid down as necessary to support a plea of insanity in a trial for murder.
2. What are the symptoms to be expected in homicidal mania? Indicate shortly on what grounds the legal tests of insanity have been unfavourably criticised by medical authorities.

PUBLIC LAW.

Thursday, 9th July 1891.—10 to 2 o'clock.

(Five Questions in each group will suffice, but in each group the First Question is imperative.)

I.—*Natural Law.*

1. What do you conceive to be the purport and scope of a Philosophy of Law?
2. What is "conscience;" what is its position in Professor Lorimer's system?
3. Give an historical sketch of the conception of the *Jus Naturale* from the time of Socrates to that of Grotius.

4. In what different ways has the distinction between Perfect and Imperfect Obligations been stated?

5. What is the *Δις κπλους* of the Greek, or the *proportio* of Mediæval writers?

6. Trace the right of property to its ultimate source, and suggest how the indefinite accumulation of property may be prevented.

II.—Public International Law.

1. Write a brief essay upon either of the two following texts:—

(a) International Law is “the vanishing point of Jurisprudence.”

(b) *Quod ex certis principiis certa argumentatione deduci non potest, et tamen ubique observatum apparet, sequitur ut ex voluntate libera ortum habeat.* Grotius, *De Jure Belli ac Pacis Proleg.* § 40.

2. Define a State. How do new States now usually arise, and when are they entitled to recognition? Illustrate from history.

3. To what extent is the consul a public minister?

4. Enumerate the methods, short of actual war, by which international disputes may be terminated.

5. Explain and state what you know concerning the following terms:—“Mare Clausum,” “Martial Law,” “Territoriality,” “*Uti possidetis*,” “Full powers.”

6. How far are treaties liable to non-ratification?

7. State and discuss either of—

(a) The Three Rules of Washington.

(b) Lord Granville’s Protocol of 1871.

III.—Private International Law.

1. “Private International Law is a doctrine of jurisdiction, and nothing more.” Explain.

2. Distinguish between Nationality and Domicile; should the former be substituted for the latter?

3. What exceptions are there to the rule that a marriage is valid everywhere if valid in the country of celebration?

4. On what conditions are the decrees of foreign tribunals recognised?

5. Is extradition a right apart from convention? What are the salient features of the practice?

6. What is the law-merchant?

7. When is a delict committed out of Scotland actionable in the Scotch courts?

POLITICAL ECONOMY.

Wednesday, 8th July, 1891.—10 to 2 o’clock.

Twelve Questions to be answered.

1. Discuss the connection between the exchange-value of a commodity, its utility, and the amount of effort and sacrifice involved in its production.

2. Investigate the causes which, with a given population and capital, may produce different average rates of wages.
3. In what ways are prices in any one country directly affected by the monetary conditions of other countries?
4. Give an analysis of Economic Rent, and notice the principal cases in which it arises.
5. Examine the effects of a tax upon all the agricultural produce grown in a country, that which is imported being tax-free, and the proceeds of the tax being given as a bounty upon the exportation of manufactured goods.
6. Examine the doctrine that difference in the comparative cost of production is the main regulative condition of international exchange.
7. Explain precisely what you understand by *normal* demand and *normal* supply, and the way in which equilibrium between them is established.
8. Examine the incidence of a tax on feu-duties.
9. How far does the distribution of land in large and small farms depend upon (a) natural (economic) causes; (b) legislation.
10. Compare Equality and Freedom as economic ideals, with special reference to socialistic schemes.
11. Discuss the effects of a great war upon (a) general prices, (b) the relative prices of raw produce and manufactures.
12. Classify the causes of fluctuations in the value of the rupee, reckoned in English, sterling money.
13. What are the conditions governing the incidence of export and import duties. Can an import duty fall entirely on the foreigner, and an export duty upon the home producer?
14. Define the terms: Production, Labour, Capital, Interest.
15. Explain fully what is meant by the *appreciation of gold*.

Graduates in Law.¹

DEGREE OF LL.B., 1888-1892.

1888.

- *James Allison, M.A.
- *Andrew Macbeth Anderson, M.A.
- Patrick James Blair, M.A.
- *James Avon Clyde, M.A.
- *Andrew William Donald, M.A.

- *David Dougal, M.A.
- *William Galbraith, M.A.
- *Peter Fraser Mackenna, M.A.
- *Robert Miller, M.A.
- *J. C. Dove Wilson, M.A.

¹ The names of all the Graduates in Law from the institution of the Degrees to 1888 will be found in the List of Graduates of the University, published in 1889, pp. 125-127. See also previous Calendars.

* Passed with distinction. "Distinction" was instituted in October 1885. Several of the Graduates of 1885-88 passed part of their Examinations before any record of distinction was preserved.

1889.

- David Anderson, M.A.
 Claud Patrick Boswell, M.A.
 Archibald Brown Campbell, M.A.
 *Andrew Henderson Briggs Constable, M.A.
 *Alistair Davidson, M.A.
 *Matthew Robin Greenlees, M.A.
 James Arthur Hope, M.A.
 *William Hunter, M.A.
 *Robert Bird Kerr, M.A.
 Francis Kinloch, B.A.
 *George Fleming Mathers, M.A.
 *John Hepburn Millar, M.A.
 *Charles David Murray, M.A.
 *Coventry Dick Peddie, M.A.
 John Ritchie, M.A.
 *Hamish Hay Stuart, M.A.
 Arthur Moodie Thomas, M.A.
 *Alexander Thomson, M.A.

1890.

- *Duncan Mearns Abel, M.A.
 *James Robertson Christie, M.A.,
 LL.B. (Glasg.).
 *William Scott Currie, M.A.
 Edmund John Gunn, M.A.
 Neil James Kennedy, B.A.
 William James Kippen, B.A.
 Lawrence M'Laren, M.A.
 John Liddell Officer, M.A.
 Alexander David Russell, M.A.
 *William Thomson, M.A.
 17th April 1891.
 Alexander Gray, M.A.

William Gray, M.A.

- *James Mercer Irvine, M.A.,
 B.Sc.
 Michael Smith, M.A.
 1st August.
 Charles Walker Bruce, M.A.
 Robert Jeffrey Cunningham,
 M.A.
 Henry William Gibson, M.A.
 *Erskine Dawson Jamieson, M.A.
 *Thomas Johnston, M.A.
 Robert Carmichael Malcolm,
 M.A.
 *Thomas Brash Morison, M.A.
 C. Morrison, M.A.
 Frederick Mills Spankie, M.A.
 *Robert Moir Williamson, M.A.
 John Buchanan Young, M.A.
 28th November.
 James Wright Forbes, M.A.
 *Andrew Fleming Smith, M.A.
 James Robert Earl Monteith
 Smith, M.A.
 Alex. Arthur Granger-Stewart,
 M.A.
 12th December.
 Andrew Brown, M.A.
 *Robert Macaulay Smith, M.A.
 14th April 1892.
 William Brown, M.A.
 *John Spreat Taylor Cameron,
 M.A.
 Augustus Wallace M'Gregor,
 M.A.

DEGREE OF B.I.

1888.

- James Millar Brown
 *Hugh Campbell, M.A.
 *Alexander Duncan.

1889.

- *Robert Liddell Cockburn.
 William Stowell Haldane.
 John Lumsden Macpherson, M.A.
 John Glover
 John James Waugh

1890.

- Duncan Cameron
 Duncan Archibald Maccoll.
 Robert Watson.
 17th April 1891.
 William Alexander Stewart.
 1st August.
 John Scrymgeour Hepburn.
 John Nisbet.
 Thomas Trotter.

* Passed with distinction. See note 2 on previous page.

DEGREE OF DOCTOR OF LAWS (LL.D.).¹

The Degree of Doctor of Laws is conferred *honoris causâ tantum*. It was first granted in 1695. Previously to 1751 it had been conferred on seven persons only. Since then more than 400 names, including some of the most distinguished in Europe, have been added to the list. The degree is not conferred in absence except in very special cases.

The following is a list of those upon whom the Degree of Doctor of Laws has been conferred in 1888-1892 :—²

1888.	
Sir William Aitken, M.D.	^{3 4} Jules Simon.
Hon. Sir Charles C. S. Bowen	Whitley Stokes, C.S.I., C.I.E.,
Alexander Cameron	D.C.L., &c.
³ Giovanni Capellini	^{3 4} Geheimrath Heinrich von Sybel.
³ Mortimer S. Howell, C.I.E.	James Ward, M.A., D.Sc.
Hon. Sir Nathaniel Lindley	³ William Dwight Whitney
Norman Macpherson	^{3 4} B. Windscheid.
John Murray, Ph.D.	1890.
Thomas Graham Murray	Sir Benjamin Baker, C.E.
³ W. H. Walshe, M.D.	Pierre Paul Leroy-Beaulieu.
1889.	
³ Sir Syed Ahmed Khan, Bahadûr,	Right Hon. Henry Chaplin, M.P.
K.C.S.I.	Sir Dyce Duckworth, M.D.
J. E. T. Aitchison, C.I.E., M.D.,	Sir John Fowler, Bart., C.E.
F.R.S., &c.	³ James Anthony Froude, M.A.,
^{3 4} James D. Dana.	LL.D.
³ Francis Day, C.I.E., &c.	Joseph H. Gilbert, M.A., Ph.D.,
³ Hon. David Dudley Field	LL.D., F.R.S.
^{3 4} C. Gegenbaur.	William W. Goodwin, D.C.L.
^{3 4} E. Haeckel.	James Hardy.
³ Rudolf von Jhering, Dr. Jur.	Sir John Kirk, M.D., G.C.M.G.
^{3 4} E. E. Kummer.	General Robert Maclagan, R.E.
William Mackintosh, M.A., Q.C.	John Marshall, M.A.
^{3 4} Konrad Maurer.	Right Hon. J. P. B. Robertson,
Maurice Paterson, B.A.	M.P.
Richard Quain, M.D., F.R.S., &c.	Frederic Seeböhm, F.S.A.
³ Rudolf von Roth, Ph.D.	³ Emeritus-Professor C. Piazza
^{3 4} Barthélemy St. Hilaire.	Smyth, F.R.A.S., &c.
	H. M. Stanley.
	Spencer Walpole.

¹ Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent Ceremonial, on giving at least a week's notice.

² The names of those who received the Degree prior to 1859 will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University of Edinburgh since its foundation," published in 1858, and of those who received the Degree from 1859 to 1888, both years included, in the List of Graduates published in 1889, and in previous Calendars.

³ Conferred *in absentia*.

Tercentenary Graduates unable to be present in 1884.

17th April 1891.

Alexander Asher, Q.C., M.P., &c.

John Beddoe, M.D., F.R.S., &c., &c.

Major C. R. Conder, R.E., D.C.L.

Felix Dahn.

Alexander Campbell Fraser, D.C.L., LL.D.

Cunningham Geikie, D.D.

Sir George Murray Humphry, M.D., F.R.S.

Sir Herbert Stanley Oakeley, M.A., Mus. Doc., LL.D., D.C.L.

John Johnstone Rogerson, B.A., LL.B.

1st August.

Colonel Sir Colin Campbell Scott Moncrieff, K.C.M.G., C.S.I.,
Royal Engineers.

Professor Simon Newcomb, Washington.

14th April 1892.

Robert M. Ferguson, Ph.D., F.R.S.E.

Right Hon. Sir Edward Fry, Lord Justice of Appeal.

¹ Theodore Nöldeke, Professor of Semitic Languages, University,
Strassburg.

Hon. Sir Charles Tupper, Bart., G.C.M.G., C.B., M.D., Canada.

¹ Rev. C. V. A. Van Dyck, M.D., D.D., Beyrout.

Rev. Thomas Walker, M.A., Professor of Logic and English
Literature, Stellenbosch, Cape Colony.

¹ Rev. Robert Boog Watson, B.A., F.R.S.E., and Vice-President of
Conchological Society.

APPLICATIONS FOR SCHOLARSHIPS, BURSARIES, &c.

Candidates for Scholarships must enter their names and addresses, and exhibit the necessary certificates at the Office of the Clerk of Senatus at least one week before the date of the competition.

The examination for first year Bursaries is in Latin and Moral Philosophy. Applicants for the second and third year Grierson Bursaries must apply on or before 15th October, and must state what distinctions they have attained in the Law Classes of the previous year.

Where the competition is open to Graduates, their standing will be computed from the date of the Graduation Ceremonial immediately following the completion of their Law Examinations.

¹ Conferred *in absentia*.

I.—BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1873	The Grierson Trustees.	80 0 0	3	1	About 26 13 4	Senatus.
II.	1873	Geo. Cairns, Solicitor.	18 19 4	1	1	About 18 19 4	Senatus.
III.	1878	Dr Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.

I. There are three Grierson Bursaries, each of the value of £26, 13s. 4d. annually. Deserving students from the parishes of Crawford or Leadhills, applying to the Clerk of Senatus on or before the 1st day of October, are entitled to preference, if they satisfy certain conditions;¹ and if the applicant is commencing his first Winter Session of the Law Curriculum he will be entitled to hold the Bursary for three years, provided "he prosecutes his studies with proper diligence."¹ The subjects of examination are Elementary Latin, English, and Arithmetic. The examination of preferential candidates will take place on Saturday, 22nd October 1892, Latin, at 9 A.M.; Arithmetic, 1 P.M.; English, 2.30 P.M.

Failing preferential candidates, the Bursaries will be tenable for one year only, and will be awarded to candidates who have attended one year in the Faculty of Arts in some University, and have applied as above-mentioned to the Secretary of the Senatus. 1. In the case of those commencing their first Winter Session in Law, the award will be to the candidate who has passed highest in Latin and Moral Philosophy at the Arts Graduation examination in October. 2. In the case of candidates commencing their second Winter Session—to the most distinguished law-student of that standing, who, if not a Graduate in Arts, has passed satisfactorily in Latin and Moral Philosophy at the Arts Examination, either in October or earlier. 3. In the case of candidates commencing the third Winter Session of the Law Curriculum—to the most distinguished law-student of that standing who has passed satisfactorily in Latin, Moral Philosophy, and Logic at the Arts Examination in October or earlier. See Regulations, CALENDAR 1877-78, p. 370. *Bursars in 1891*—First year, *David Moffat* (Preferential Candidate). Second year, *T. Callander Wade*. Third year, *A. Blairford Smith*.

II. The competition for the Cairns Bursary, which is tenable for one

¹ See Calendar 1877-78, p. 370. By "proper diligence" is understood regular attendance on Classes, and on Class Examinations with reasonable proficiency.

year only, and is not subject to any preferences, is subject to the same conditions as those for the second year Grierson Bursary. This Bursary is open to Students who have completed one year in the Law Faculty. *Bursar—1890, James Grant.*

III. For the *Thomson Bursaries* application should be made to Messrs Traquair, Dickson, & Maclaren, 11 Hill Street. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh, are preferred. The Examination is in Latin and Moral Philosophy, and is the same as the October Examinations in those subjects for M.A. See CALENDAR 1879-80, p. 345. *Bursars—1888, T. B. Morison. 1889, Robert Munro, M.A. 1890, F. J. Thomson, M.A. (Preferential Candidate). 1891, Alexander McCallum.*

Bursaries gained in the Faculty of Arts, the holders of which may study in the Faculty of Law.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1809	Dr Donald Grant, London.	£180 0 0 About	2	4	£90 0 0 About	Dr Grant's Trustees.
II.	1846	John Jamieson, Edinburgh.	26 0 0 About	1	4	26 0 0	Principal and Two Professors.
III.	1871	The Sibbald Bursaries.	150 0 0	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
IV.	1883	Wm. Renton, Edinburgh.	19 19 6	1	1	19 19 6	Professors of Mathematics, Natural Philosophy, Chemistry, and Political Economy.
V.	1886	R. Allan, Feuar, Kelso.	About 90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
VI.	1889	Daniel MacLaurin, London.	70 0 0	1	4	70 0 0	Town Council.

I. These Bursaries may be held during the Curriculum in Law. See p. 201.

II.	Do.	do.	do.	See p. 201.
III.	Do.	do.	do.	See p. 203.
IV.	Do.	do.	do.	See p. 206.
V.	Do.	do.	do.	See p. 207.
VI.	Do.	do.	do.	See p. 208.

II.—VANS DUNLOP LAW SCHOLARSHIPS.

For GENERAL REGULATIONS, see page 219.

There are Four Vans Dunlop Scholarships, each of the value of about £100 per annum, and tenable for three years, more or less directly connected with the Faculty of Law :—

I. Vans Dunlop Scholarship in Commercial and Political Economy and Mercantile Law, for which both Law and Arts Students are eligible.

Next vacancy in October 1892.

See Scholarships in Arts (XXXI., p. 221).

Scholars—1888, A. H. Briggs Constable, M.A.; *proxime accessit*—J. M. Irvine, M.A., B.Sc. 1891, No award.

II. Vans Dunlop Scholarship in the Law of Nature and Nations, Civil Law, and Constitutional Law and History.

(a.) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, shall have graduated in Law in this University, or shall have passed the Graduation Examination in the three subjects of examination for the Scholarship : provided they have written papers of the LL.B. standard at the Graduation Examination, and have obtained an average of not less than 75 per cent. of marks in these subjects.

(b.) The Competition is by written Essays on branches of law to be announced at least one year before the date of competition. The precise subject of each of the essays will be set on the conclusion of the Graduation Examination in November.

(c.) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.

Next vacancy in November 1892.

Scholars—1889, J. M. Irvine, M.A., B.Sc.

III. Vans Dunlop Scholarship in Scots Law and Conveyancing.

(a.) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, shall have graduated in Law in this University, or shall have passed the Graduation Examination in Scots Law, Conveyancing, and Medical Jurisprudence : provided they have obtained at the Graduation Examination an average of not less than 75 per cent. of marks in these three subjects.

(b.) The Competition is by written Essays on (1) the Civil Law of Scotland ; (2) the Criminal Law of Scotland ; and (3) Conveyancing,

the particular branches of which will be announced at least one year before the date of competition. The precise subject of each essay will be set on the conclusion of the Graduation Examination in October 1893.

(c.) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.

Next vacancy in November 1893.

Scholars—1890, *William Hunter, M.A., LL.B.*

IV. Vans Dunlop Scholarship in History.

Next vacancy in October 1892.

See Scholarships in Faculty of Arts (XXXVI., p. 223).

1889, *D. P. Heatley.* |

CONDITIONS OF TENURE.

Each holder of No. II. and No. III. of these Scholarships will be required to deliver, to the satisfaction of the Faculty of Law, two courses of three lectures each on one of the subjects of examination for the Scholarship, viz., one course in the second, and the other in the third year of his tenure.

V.—The Lorimer Travelling Scholarship.

The Lorimer Travelling Scholarship, of the annual value of about £50, tenable for two years, for the encouragement of the study of the "Law of Nature and Nations" in foreign Law Schools by Students and Graduates in the Faculty of Law, was founded by the Association for the better Endowment of the University, to the extent of one-half, with funds collected by the Lorimer Memorial Committee, supplemented by a grant made by the Association for the better Endowment of the University. The Scholarship is open to Candidates who, during the two years immediately preceding that in which a scholar falls to be appointed, may have completed the examinations for any Degree in Law in the University in the following subjects, namely—(1) The "Law of Nature and Nations" (including therein the Philosophy of Law); (2) The Civil Law; and (3) Either (a) Constitutional Law and History, or (b) Political Economy. The Law School or Schools furth of Great Britain and Ireland which the Scholar proposes to attend must be previously approved by the Faculty of Law. The Candidate who, in the opinion of the Faculty of Law, passes with most distinction in the Examinations for Graduation in Law, in the examinations above set forth, during the two years immediately preceding the election, and who is willing to fulfil the conditions imposed by the Deed of Foundation, will be eligible for election, consideration being always given to the proficiency shown by the Candidate in the first of the above-named subjects, and to his knowledge of the modern

language or languages spoken in the Law School or Schools which he selects. The Scholarship may be open for Competition in 1895. For Deed of Foundation, see CALENDAR for 1892-93, p. 538.

III.—WILLIAM DICKSON TRAVELLING FUND.

This fund is for the purpose of assisting Graduates of any Faculty of not more than three years' standing to travel for the purposes of study or research. For particulars, see page 227.

IV.—THE FORENSIC PRIZE.

This Prize, of the value of £10, founded in 1858 by the Forensic Society with the view of encouraging the study of Roman Law, is awarded either in July or in October, as may be found convenient. It can be competed for only by Students of the Civil Law Class during the preceding year. The Fund, amounting to about £280, is invested in the name of the Dean and Treasurer of the Faculty of Advocates and the Professors of Civil and Scots Law.

1888. A. M. Anderson, LL.B.

1889 { W. Hunter, LL.B. } equal
 { J. M. Irvine, LL.B. }

1890 { Alex. Brown, LL.B. } equal
 { T. B. Morison, LL.B. }

1891 Thomas C. Wade.

„ Prox. acces.—Robt. Munro,
 M.A., and A. D.
 Donald.

SCHOLARSHIPS, BURSARIES, AND PRIZES, &c., OPEN IN 1892-93.

I.—SCHOLARSHIPS.

No. I. of the above Scholarships will be open for competition after the conclusion of the Graduation Examination in November 1892. See works on Political Economy recommended to Candidates, p. 228.

No. II. will be offered for competition after the conclusion of the Graduation Examination in November 1892. The subjects of the Essays to be set will be taken from the following branches of Law :—

(1.) "Treaties."

(2.) "The Roman Law of Sale."

(3.) "The Constitution during the Georgian Era."

No. III. of the above Scholarships will be offered for competition after the conclusion of the Graduation Examination in November 1893.

The subjects of the Essays to be set for this Scholarship will be taken from the following branches of Law :—

- (1.) "The Scottish Law of Succession and Trust."
- (2.) "The Scottish Criminal Law."
- (3.) "The System of Tenure and of Titles to Land in Scotland."

No. IV. will be offered for competition on the third Monday, Tuesday, and Wednesday in October 1892, beginning at 10 A.M. each day. For subjects prescribed see 5, page 229.

II.—BURSARIES.

The Subjects of Examination for first-year Bursaries are Latin and Moral Philosophy, and are the same as the October Examinations for M.A.

1, 2. *Two Grierson Bursaries*, value £26, 13s. 4d. each, restricted in the first place to natives of the parishes of Crawford and Leadhills, and tenable for three years, whom failing they will be tenable for one year, one open to Students beginning their first Winter Session, and one to Students beginning their third Winter Session (see general rule as to application, *sup.*).

3. The *Cairns Bursary*, value £18, 19s. 6d., tenable for one year (see general rule, *sup.*).

4. The *Sibbald Bursaries*, of the annual value of £30, and tenable for three years, are also tenable by Students in the Faculty of Law entering the University for the first time ; see Bursaries (Arts) No. LII., pp. 197, 203.

5. A *Thomson Bursary*, of £25 a year, tenable for four years. Candidates must be Matriculated Students commencing their First Winter Session in the Faculty of Law, and must intimate their intention to compete to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street, the Agents for Dr Thomson's Trustees, and also to the Clerk of the Senatus on or before 1st October. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries or the city of Edinburgh, are preferred.

6. *Renton Bursary* (See No. 22, p. 233.

III.—PRIZES.

1. The *Forensic Prize* of £10 is awarded annually upon special examination held either in July or October, as may be found most convenient. It can be competed for only by Students of the Civil Law class during the preceding year. The subjects of next examina-

tion will be (1) The External History of the Law, from the commencement of the Reign of Diocletian to the Death of Constantine; and (2) The Law of Marriage.

2. The *William Dickson Travelling Fund* (see page 227).
3. The *Lord Rector's Prize* (see page 230).
- 4, 5, 6. *Gray Prizes* (see 6, 7, 8, page 210).

JOHN KIRKPATRICK, LL.D.,
Dean of the Faculty of Law.

IV.

FACULTY OF MEDICINE.

Dean.

PROFESSOR THOMAS RICHARD FRASER, M.D., F.R.S.,
University New Buildings.

Programme of Classes.

—o—

FACULTY OF MEDICINE.

SUMMER SESSION, 1892.

The Classes will be opened as follows, and will meet daily (Saturdays excepted), unless otherwise stated.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.
Botany.....	2 May, 8 o'clock	{ Prof. Bayley Balfour,	£4 4 ¹
Practical Botany.....	2 May, 9 „		2 2
Field Demonstrations on <i>Saturdays</i> .			
Physics.....	2 May, 12 „	Prof. Tait, ...	3 3
Medical Jurisprudence	2 May, 10 „	{ Prof. Sir Doug- las MacLagan,	4 4
Natural History.....	2 May, 1 „	{ Prof. Ewart,	4 4
Advanced Class	2 May, 3 „		2 2
Practical Zoology.....	2 May, 10.45 „		2 2 ²
Advanced Prac. Zool...	2 May, 1.30 „		3 3 ²
Prac. Materia Medica (incl. Pharmacy)....	{ 2 May, 10 „	Prof. Fraser, ...	3 3
Chemistry (Organic), Advanced Class — (<i>Tues., Wed., & Thur.</i>)		{ Prof. Crum Brown,	2 2
Do., Practical	2 May, 2 „		3 3
Anatom. Demonstra.	3 May, 10 „	{ Prof. Sir W. Turner and Demonstrators,	2 2
Practical Anatomy.....	2 May, <i>daily</i> .		
Clinical Surgery— (<i>Mon. & Thurs.</i>)....	{ 2 May, 12 „	Prof. Annandale,	3 3
Clinical Medicine— (<i>Tues. & Fri.</i>).....		{ Profs. Grainger Stewart, Fraser and Greenfield, and Prof. Simp- son on Dis. of Women.	3 3
Clinical Instruction in the Royal Infirmary.	{ 11 <i>daily</i> . . .	{ The Clinical Professors	Hospital Ticket. ³
Obstetrical and Gynecol. Operations— (<i>Tues. & Fri.</i>)			£3 3

¹ Besides Garden Fee of 5s.

² Besides charge of 10s. for Laboratory Expenses.

³ For Fees see page 330.

SUMMER SESSION—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.
Practical Physiology, including Histology....	{ 2 May, 3 o'cl.	Prof. Rutherford,	3 3
Operative Surgery and Surgical Appliances	{ 5 April, ¹	Prof. Chiene, ...	3 3
Practical Morbid Anatomy and Pathology	{ 2 May, 11 ,,	Prof. Greenfield,...	3 3
Lecturers.			
Mental Diseases, with Clinical Instruction at Morningside Asylum (<i>Mon. Wed. & Frid.</i>)	{ 2 May, 3 o'clock	{ Thos. S. Clouston, M.D., ...	3 3 ²
Diseases of the Eye ...	3 May, 9 ,,	{ Geo. A. Berry, M.B., C.M.,	3 3 ²
Clinical Instruction on Diseases of Children, at Royal Hospital for Sick Children.....	{ 2 May, { <i>Mon.</i> 4.15 ; { <i>Sat.</i> 11.45.	{ James Carmichael, M.D., John Playfair, M.B.,.....	1 1 ²

WINTER SESSION, 1892-93.

The Classes in the Faculty of Medicine will be opened on Tuesday, 11th October. They will meet daily (Saturdays excepted), unless otherwise stated.

Classes.	Days of Opening, and Hours of Lectures.	Professors.	Class Fees.
Practice of Physic ...	11 Oct., 9 o'cl.	Prof. G. Stewart,	£4 4
Chemistry	11 Oct., 10 ,,	Prof. Crum Brown	{ 4 4
Practical Chemistry {	1 Dec., 11 and 2 o'cl.		
Surgery	11 Oct., 2 ,,	Prof. Chiene, ...	4 4
Institutes of Medicine	11 Oct., 10 ,,	Prof. Rutherford,	{ 4 4
Practical Physiology	12 Oct., 1 ,,		
Midwifery & Diseases of Women & Childr.	{ 11 Oct., 10 ,,	Prof. Simpson, ...	4 4
Clinical Surgery—Royal Infirmary, <i>Mon. & Thurs.</i>	{ 13 Oct., 12 ,,	Prof. Annandale,	4 4

¹ Class meets during April at 10 A.M.

² Five Shillings University Entrance-Fee for Non-Matriculated Students.

WINTER SESSION—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.
Clinical Medicine— Royal Infirmary, <i>Tues. & Fri. ...</i> }	11 Oct., 12-2 o'clock }	Profs. G. Stewart, Fraser, and Greenfield, and Simpson on Diseases of Women,.....	4 4
Clinical Instruction in the Royal Infirmary }	11 <i>daily</i> . . }	The Clinical Professors.....	Hospital Ticket. ¹
Anatomy	11 Oct., 1 o'clock.	Prof. Sir William	£4 4
Practical Anatomy ...	3 Oct., <i>daily</i> }	Turner, ...	3 3
Anatom. Demonstr. ..	11 Oct., 4 o'clock.		2 2 ²
Materia Medica	11 Oct., 2 ,, }	Prof. Fraser,.....	4 4
Pract. Mat. Medica, includ. Pharmacy }	12 Oct., 10 ,, }		3 3
General Pathology ...	11 Oct., 3 ,, }	Prof. Greenfield,	4 4
Practical Pathology	11 Oct., <i>daily</i> }		3 3
Natural History ³	11 Oct., 12 o'clock.		4 4
Advanced Class ³	11 Oct., 3 ,, }	Prof. Ewart, ...	2 2
Practical Zoology ³ ...	11 Oct., }		2 2 ⁴
Advanced Prac. Zool. ³	12 Oct., }		3 3 ⁴
Public Health Lectures	25 Jan., 3 ,, }	Prof. Sir Douglas MacLagan, ...	0 0 ⁵
Sanitary Engineer- ing and Drawing }	9 Nov., 10 o'clock.	Prof. Armstrong,	3 3
Botany ³	11 Oct., }		4 4
Prac. Bot. Element. ³	11 Oct., }	Prof. B. Balfour,.	2 2
Do. do. Advanced ³	11 Oct., }		3 3
Natural Philosophy ...	19 Oct., 11 ,, }	Prof. Tait,.....	3 3
Lecturers.			
Clinical Instruction on Diseases of Children }	15 Oct., 11.45 o'clock. }	Jas. Carmichael, M.D., John Playfair, M.B.,	1 1 ⁶
Compar. Embryology	4 Jan. 2 ,, }	Mr George Brook,	3 3 ⁶

The Fee for a Second Course of any of the Lectures is £3, 3s.; any subsequent course is free. If a Perpetual Ticket is taken out at the beginning of the First Course, the Fee is £6, 6s.

¹ For Fees see page 330.

² Three Months' Course.

³ When taken along with Practical Anatomy, £1, 1s.

⁴ Besides charge of 10s. for Laboratory Expenses.

⁵ Open to Members of Medical Jurisprudence Class, 1892.

⁶ Five Shillings University Entrance-Fee for Non-Matriculated Students.

ROYAL INFIRMARY.

Royal Infirmary at 11 a.m. *daily*.—Perpetual Ticket, in one payment, £12; Annual Ticket, £6, 6s.; Six Months, £4, 4s.; Three Months, £2, 2s. Separate payments, amounting to £12, 12s., entitle to a Perpetual Ticket.

MATRICULATION FEES.

For the Academical Year, 1st October to 1st October,	. £1 0 0
For the Summer Session only, 1st May to 1st October,	. 0 10 0
University entrance-fee in lieu of Matriculation for each of certain additional Courses (see Class-Lists),	. 0 5 0

CLASS SESSIONS.

There are Two Sessions in each year, viz. :—

I. The Summer Session, which opens on the 2nd of May and closes on the 22nd of July 1892.

II. The Winter Session, which opens on the 11th of October 1892, and closes on the 17th of March 1893. Practical Anatomy and Public Health Laboratory work begin on the 3rd of October 1892.

The Classes will meet for the last time before the Christmas Vacation on Wednesday, 21st December 1892, and will re-assemble on Wednesday, 4th January 1893.

LABORATORIES.

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

ROYAL BOTANIC GARDEN and BOTANICAL MUSEUM AND LABORATORY.—These, as well as the Herbarium, with which is incorporated the Collection of dried plants belonging to the University, are used by University Students for the practical study of plants and for botanical research, and are open daily, under the superintendence of the Professor, assisted by James Adam Terras, B.Sc., and others.

PHYSIOLOGICAL LABORATORY, for the prosecution of Physiological Research, and for the study of Practical Physiology, open daily, under the superintendence of the Professor, assisted by E. W. Carlier, M.D., B.Sc., and A. J. Whiting, M.B.

PRACTICE OF PHYSIC LABORATORY, for the study of Medicine, and for research in connection with the Practice of Physic, open daily,

under the superintendence of the Professor, assisted by Robert A. Fleming, M.A., M.B., C.M.

DISSECTING ROOMS, open daily under the superintendence of Professor Sir William Turner, assisted by David Hepburn, M.D.; James Musgrove, M.D.; and other assistants. Opens 3rd October 1892.

THE CHEMICAL LABORATORIES (distinct from the Practical Chemistry Room), completed in 1885, contain accommodation for forty Students. The Laboratories are fitted with all necessary apparatus for chemical analysis and research, open daily, under the superintendence of the Professor, assisted by John Gibson, Ph.D.; James Walker, D.Sc., Ph.D.; and Theodore Rettie, B.Sc.¹

OBSTETRICAL AND GYNECOLOGICAL LABORATORY, for research and study of practical work, under the superintendence of the Professor, assisted by J. Clarence Webster, B.A., M.D.

TUTORIAL CLASS OF CLINICAL MEDICINE, in the Wards of the Royal Infirmary, by Joseph Tillie, M.D.; Robert Muir, M.D.; Robert A. Fleming, M.A., M.B., C.M.; under the superintendence of the Clinical Professors.

NATURAL HISTORY LABORATORIES, for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the superintendence of the Professor, assisted by J. Beard, B.Sc., Ph.D., and others.¹

MATERIA MEDICA LABORATORIES, for the study of Practical Materia Medica and Practical Pharmacy, and for Pharmacological and Pharmaceutical research, open daily, under the superintendence of the Professor, assisted by Joseph Tillie, M.D., and William C. Sillar, M.B., C.M., B.Sc.

TUTORIAL CLASS OF CLINICAL SURGERY AND SURGICAL PATHOLOGY, in the Infirmary, by A. Logan Turner, M.B., C.M., and the Resident Surgeons, under the superintendence of the Clinical Professor.

PUBLIC HEALTH LABORATORY, for Hygienic investigation, comprises three departments, viz.: a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the superintendence of the Professor, assisted by Charles Hunter Stewart, M.B., C.M., B.Sc. Opens 3rd October 1892.¹

SURGICAL LABORATORY, divided into two parts—(a) General Surgical Pathology, (b) Bacteriology,—is utilised for teaching Systematic Surgery, and every facility is afforded for investigation, under the superintendence of the Professor, assisted by Harold J. Stiles, M.B., C.M.

PATHOLOGICAL LABORATORY, for the study of Pathological Anatomy and for Pathological Research, including Histological and Bacteriological Departments, under the superintendence of the Professor, assisted by Robert Muir, M.A., M.D., and David Stuart, M.B., C.M.

¹ Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

EMBRYOLOGICAL LABORATORY, for research and for study of the development of Vertebrate and Invertebrate Types, open daily under the Superintendence of the Lecturer.

THE ROYAL EDINBURGH ASYLUM is open to members of the Class of Mental Diseases for Practical Instruction, under the superintendence of the chief Physician.

MINIMUM CURRICULUM FOR DEGREES IN MEDICINE, WITH SUGGESTED ORDER OF STUDY AND EXAMINATION.

Whilst there is no authorised order of study, the usual Course is given below. The Preliminary Examination in General Education is to be taken in the month of March or of October, before entering the Classes in the Faculty of Medicine. Students are recommended to begin their Studies in the Summer Session.

It is to be observed that the Table gives only one Course of Instruction on each subject, that being all that is required by the Regulations. It does not include extra courses nor courses on special subjects, which Students may voluntarily attend. Those who can spare the time, are recommended to extend the course of study over five years.

FIRST SUMMER SESSION.

Preliminary Examination (if not previously passed).
Botany.
Natural History.
Physics.¹

FIRST WINTER SESSION.

Anatomy.
Practical Anatomy.
Chemistry.
Practical Chemistry.

SECOND SUMMER SESSION.

Botany or Natural History (if not previously attended).
Practical Chemistry (if not previously attended).
Physics (if not previously attended).
Hospital. (Perpetual Ticket).

SECOND WINTER SESSION.

Institutes of Medicine.
Practical Physiology.
Surgery.
Hospital.

THIRD SUMMER SESSION.

Practical Materia Medica, including Practical Pharmacy.
Practical Physiology (if not previously attended).
Practical Pathology.
Hospital.

THIRD WINTER SESSION.

Materia Medica.
Pathology.
Clinical Surgery (can only be taken by students who at the time have tickets for hospital attendance at the Royal Infirmary).

¹ Physics is also now required by the Regulations of the General Medical Council. See Outline of Examination, p. 375.

Hospital.
Examination in Anatomy,
Physiology, Materia Medica,
Pathology in April or July.

FOURTH SUMMER SESSION.

Medical Jurisprudence.
Out-Door Dispensary.
Hospital and Clinical Classes.

FOURTH WINTER SESSION.

Practice of Medicine.
Midwifery.
Practical Midwifery.

Clinical Medicine (can only be
taken by students who at the
time have tickets for hospital
attendance at the Royal
Infirmary).

Vaccination.
Out-Door Dispensary.
Hospital.

FIFTH SUMMER SESSION.¹

Hospital.
Final Examinations for M.B.
and C.M.

* * Information as to fees for the above and other classes will be
found at pp. 327-331.

¹ A Five Years' Curriculum is now required by the regulations of the General
Medical Council for all who commenced their medical education after 1st January
1892.

Professorial Courses of Lectures, &c.

1892-1893.

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I.—BOTANY.

PROFESSOR BAYLEY BALFOUR.

Summer Session.

1. LECTURES.—The course is a general one—Morphological, Physiological, and Systematic—illustrated by diagrams, models, and fresh specimens, and by demonstrations of microscopic specimens. Lectures are given every Monday, Tuesday, Wednesday, Thursday, and Friday. In addition, lectures on special parts of the subject are given at intervals during the Session.

2. PRACTICAL CLASS.—In this class opportunity is given for the examination of microscopic structure of plants, and for the study of life-histories of plants illustrating the lectures. They are conducted by the Professor, and Assistants.

3. EXCURSIONS. — Excursions are made on Saturdays for the practical study of plants in the fields.

Winter Session.

1. LECTURES.—A three months' course of lectures similar to that of the Summer Session is given.

2. PRACTICAL CLASS.—A class similar to that of the Summer Session is conducted by the Professor and Assistants.

The Royal Botanic Garden, with the Botanical Museum and Herbarium, are open daily for the examination of living as well as preserved specimens of plants.

II.—NATURAL HISTORY.

PROFESSOR EWART.

I. LECTURES ON ZOOLOGY.

Summer Session.

The first part of the course will treat of the Principles of Biology as illustrated by the Life-History, Morphology, and Physiology of one of the Vertebrata. The Distinctive Characters of the Chordata, and the structure, habits, &c., of a series of vertebrate types will next be considered. The rest of the course will be chiefly devoted to (1.) The consideration of the various Invertebrate Groups, the leading types of which will be described in detail. (2.) The structure and life-history of the more important human parasites, and (3.) The principles of Embryology, Classification, and Geographical Distribution.

Winter Session.

The course of lectures in winter will deal with the same subjects as the Summer Course, but more attention will be given to the Morphology, Physiology, and Classification of the Invertebrata. Both the Summer and Winter Courses are intended to meet the requirements of Candidates preparing for the First Professional Examination in Medicine or the First Examination for the Degree of Bachelor of Science.

2. ELEMENTARY PRACTICAL ZOOLOGY.

Summer and Winter Sessions.

This Class is intended to assist Students preparing for the First Professional Examination in Medicine and the First B.Sc. Examination. In each Session the Members of the Class will study the anatomy of a series of animal types, such as:—*Amœba*, *Paramœcium*, *Hydra*, *Distoma*, *Hirudo*, *Arenicola*, *Anodonta*, *Helix*, *Astacus*, *Periplaneta*, *Raia*, *Clupea*, *Rana*, *Columba*, and *Lepus*.

3. ADVANCED CLASS.

Summer and Winter Sessions.

These Lectures are especially intended to assist Students in their preparation for the Second B.Sc. in Zoology. The lectures will have reference mainly to the types contained in the syllabus for the Second B.Sc. Examination, but account will also be taken of the progress of Scientific Research, and the more important recent discoveries will be described.

During the Summer Session an account will be given of the Comparative Morphology of the chief systems of organs of the Invertebrata, more especially of the nervous, reproductive, locomotor, and excretory systems, and also of the phenomena of Reproduction in the Protozoa and Metazoa.

The Winter Course will be devoted to the Comparative Morphology of the Vertebrata, the nervous system and its sense organs, electrical and luminous organs and the genito-urinary system receiving particular attention.

As far as time permits the present position of the question as to the morphological nature of the vertebrate head and skeleton will be discussed.

In both courses the principles which form the scientific basis of Comparative Morphology will be placed prominently before the student. The class will meet at least three times each week during the Summer Session and during the first half of the Winter Session.

LABORATORY WORK.

The Laboratory will be open during the Summer and the first half of the Winter Sessions for the dissection and microscopic examination of the types prescribed for the Second Bachelor of Science Examination in Zoology, and for the acquiring of a practical acquaintance with the methods of research.

RESEARCH WORK.

The Laboratories will also be available during both Semesters for research. Students desiring to be admitted for this purpose should apply to the Professor. No Laboratory fees will be charged for such Students.

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III. CHEMISTRY.

PROFESSOR CRUM BROWN.

I. LECTURES ON CHEMISTRY—

In the Lectures the general laws of chemical action are explained and illustrated.

The non-metallic elements and their more important compounds are described in detail. The metals and the different series of metallic salts are considered more generally, details being given in the case of the more important substances.

The principles upon which the classification of organic substances is based are explained, and the properties of the chief groups illustrated by means of examples.

Tutorial Classes, meeting once a week, are conducted by Dr Dobbin.

Text-Book.—Wurtz, “Elements of Modern Chemistry” by Greene.

A Class for Advanced Students is held in Summer. The subject for the Summer of 1891 will be Organic Chemistry.

2. LABORATORY.—The Laboratory is open for the reception of students who desire to study Analytical Chemistry, or to undertake chemical investigations. The instruction in the Laboratory is given by the Professor, assisted by Dr Gibson.

Attendance on this Course qualifies as “Practical Chemistry” for the First Professional Examination.

[For details in reference to the HOPE PRIZE, and Hope Prize Scholarship, which are attached to the Laboratory, and the

WILSON MEMORIAL PRIZE, which is attached to the
of Chemistry, see under *University Prizes and Scholar-
..]*

3. PRACTICAL CLASSES.—The work of these classes consists
in the study of the reactions of the commoner salts.

IV. PHYSICS.

PROFESSOR TAIT.

The subjects embraced in the Course of Physics are the
following :—

1. Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

2. Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with the Physical Measurement of time.

3. Sound, and Wave-propagation in general, Intensity, Pitch, and Quality of Musical Sounds, Harmonics, Concorde, &c.

4. Heat, its Nature, Effects, Measurement, Transference, and Transformations—Measurement of Temperature and of Absolute Temperature; Thermo-dynamics.

5. Light (1) Geometrical Optics, Speed of Light, Laws of Reflection and Refraction, Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes, Images, Conditions of Distinct Vision; (2) Physical Optics, Interference, Dispersion, Diffraction, Double Refraction, Polarization, Spectrum Analysis.

6. Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto- Electricity, Electro-Dynamics, and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltmeters, &c.

V. ANATOMY.

PROFESSOR SIR WILLIAM TURNER.

Winter Courses.

I. LECTURES ON ANATOMY, at 1 P.M.—It is intended in this Course of Lectures to bring before the Student, in a systematic manner, the structure of the Human Body. The different systems and organs will be described, both in the more obvious arrangements and relations of parts which can be examined by the naked eye, and in their more minute or microscopic structure. The Course includes, therefore, both Textural or General Anatomy and Descriptive Anatomy. The Lectures are illustrated by recent dissections, by wet and dry preparations, by a large collection of Osteological specimens, and by drawings and diagrams. Structures too minute to be recognised by the naked eye are demonstrated under the Microscope.

To assist the Junior Members of the Lecture Class to acquire a knowledge of Osteology, Tutorial Demonstrations on the bones will be given during the earlier months of the Session without additional fee. All the members of this class have access to a systematically arranged series of osteological specimens and of models. Written examinations for both Junior and Senior Students are held periodically during the Session.

Text-Books—The Professor's "Introduction to Human Anatomy," along with Gray's "Anatomy," or with Wilson's "Anatomy." Quain's "Elements of Anatomy." Holden's "Osteology."

2. ANATOMICAL DEMONSTRATIONS, at 4 P.M.—In this Course, which is conducted in the Theatre, the structure of the human body is displayed and demonstrated topographically, from the surface inwards. The Professor and the Demonstrator, David Hepburn, M.D., will jointly conduct the Course.

3. PRACTICAL ANATOMY, under the superintendence of the Professor, aided by the Demonstrators, David Hepburn,

M.D., C.M., James Musgrove, M.D., J. W. Crerar, M.B., and by several other assistants. Examinations of both Junior and Senior Students on dissected parts are regularly conducted by the Demonstrators and the Professor. Special tutorial Demonstrations will also be given to the Senior Students on the joints, the brain, the organs of special sense, and other viscera.

This Course will commence on Monday, October 3rd. The Dissecting-rooms are open from 9 A.M. to 5 P.M., and on Saturdays from 9 A.M. to noon. The Mackenzie Bursaries are awarded to members of this Class for proficiency in dissection.

Text-Books.—“Demonstrations of Anatomy,” by Ellis, or Heath’s “Practical Anatomy,” or Holden’s “Manual of the Dissection of the Human Body,” or Cunningham’s “Dissector’s Guide.”

Summer Courses.

I. PRACTICAL ANATOMY, as in Winter. The Course will commence on Monday, 2nd May. The Rooms are open from 9 A.M. to 5 P.M.; on Saturdays from 9 A.M. to noon. Examinations are regularly conducted on dissected parts by the Professor and by the Demonstrators, David Hepburn, M.D., C.M., James Musgrove, M.D., J. W. Crerar, M.B., and other assistants, and the brain and organs of sense will be specially demonstrated.

2. ANATOMICAL DEMONSTRATIONS in the Theatre will commence on Tuesday, 5th May, and will be given partly by the Professor, and partly by the Demonstrator, David Hepburn, M.D. This Course is open, without additional Fee, to those engaged in Practical Anatomy during the Summer, and will consist of demonstrations on some special departments of Anatomy.

VI. INSTITUTES OF MEDICINE OR PHYSIOLOGY.

PROFESSOR RUTHERFORD.

This Course, consisting of 100 Lectures, is held in the Winter. It includes an account of—

1. The Structure, Composition, and Functions of the Tissues of the Body.

2. The Nutrition of the Body, including Circulation, Respiration, Alimentation, Nutrition of the Tissues, Excretion, together with the minute structure of the organs concerned.

3. Animal Heat.

4. Voice and Speech.

5. The minute structure and physiology of the Sense organs, and the special physiology of the Nervous System.

6. Reproduction and Development.

There is a printed Syllabus with short notes of the Lectures.

Text-Book—Kirkes' Physiology and Foster's Physiology.

Books recommended for consultation.—Landois' "Physiology," Halliburton's "Chemical Physiology," Bunge's "Physiological Chemistry."

PRACTICAL PHYSIOLOGY.

This Course is divided into three sections—

1. *Practical Histology*, in which every Student prepares, examines, and preserves for himself most of the tissues and organs of the body. Each student is provided with a microscope, and all reagents.

2. *Practical Chemical Physiology*, in which every student performs the qualitative and quantitative analysis of the Urine in its normal and abnormal conditions, with special reference to clinical work, and such practical work at the Chemistry of Proteids and Carbohydrates, Blood, Milk, and Bile as is possible in a class.

The above sections of the class are held both in the Winter

and Summer Sessions. In each session the class meets sixty times.

3. *Demonstrations of Physiological Instruments.*—This section of the class is held only in Winter, and is open to all who have attended the other sections of the course.

PHYSIOLOGICAL RESEARCH.

The Physiological Laboratory is open daily for the prosecution of Physiological Research. Application must be made to the Professor.

VII. MATERIA MEDICA AND THERAPEUTICS.

PROFESSOR THOMAS R. FRASER.

Materia Medica comprises the subjects of pharmacognosy, pharmacy, pharmacology, therapeutics, and dietetics; and the remedial applications of electricity and galvanism, heat and cold, &c. Instruction in Materia Medica is given in (A) a course of 100 Lectures during the Winter Session, and in (B) Practical Classes during the Summer Session, and of equivalent duration during the Winter Session.

A.—LECTURES ON MATERIA MEDICA AND THERAPEUTICS.

—This course includes the following among other *Special Topics*.—1. The natural history, pharmacy, physiological action (or pharmacology), therapeutical uses, and modes of administering remedies, ordinarily so called. Such remedies consist of (a) mineral substances; (b) vegetable substances; (c) animal substances. 2. Food and drink, considered generally and in reference to disease. 3. Electricity and galvanism, with a description of the apparatus required for their application in disease. 4. Heat and cold. 5. Climate. In each course of Lectures the subjects included in 1 will be fully discussed, but a selection only will be made from the subjects included in 2, 3, 4, and 5, according to the time that may be left for their consideration.

B.—PRACTICAL CLASSES.—In these classes, *practical* instruction is given in the following subjects embraced in *Materia Medica*, but which cannot satisfactorily be taught in a course of lectures:—1. Pharmacognosy, or the recognition of drugs by their physical and chemical characters, and the detection of adulterations. 2. Pharmacy, or the processes for obtaining the pharmaceutical preparations of drugs. 3. Dispensing, or the making up of medicines in forms suitable for administration in disease.

It is recommended that the practical class be attended before the course of lectures on *Materia Medica* and Therapeutics. Practical classes are taught during the Summer Session, when they meet daily at such hours as are found most convenient. A winter class will also be formed in October.

PHARMACOLOGICAL AND PHARMACEUTICAL LABORATORIES.

The above laboratories will be open daily to present and former Students of the class of *Materia Medica* for Pharmacological and Pharmaceutical Research, under the superintendence of the Professor and his Assistants.

VIII. GENERAL PATHOLOGY, INCLUDING MORBID ANATOMY.

PROFESSOR GREENFIELD.

This Course includes General Pathology, General Pathological Anatomy and Histology, and Systematic Morbid Anatomy.

The subjects are treated mainly in the following order—

1. General Pathology (including General Pathological Anatomy), *i.e.*, the study of the processes of disease, as to their causation, phenomena, physiological and physico-chemical relations and characters. Under this head are considered Degenerative Processes, Inflammation, Repair, Morbid Growths, &c.

2. General Etiology is treated in fuller detail with reference

to Parasitic and Infective Diseases, and includes Bacteriology, methods of bacteriological research, and a special study of the more important infective diseases.

3. Systematic Morbid Anatomy and Histology—a study of the more important diseases of the principal systems and organs of the body, especially in relation to structural and physical alterations.

In illustration of the lectures, in addition to plates, diagrams, &c., there are frequent naked eye and microscopic demonstrations of recent specimens, of preparations from the University Anatomical Museum and from the Professor's private collection—and also demonstrations of apparatus, photographs, sections, &c., by the limelight, and in other ways.

PRACTICAL PATHOLOGY.

Classes for Practical Instruction in MORBID ANATOMY and PATHOLOGICAL HISTOLOGY are conducted in the Pathological Laboratory—microscopes and other necessary apparatus being supplied. The Course consists of—1st. Naked Eye Demonstration; 2d. Histological investigation and preparation of Morbid Structures and Organs.

For the Winter Course, the class meets three times a week, from the beginning of November till the end of March. For the Summer Course, five times a week, from the beginning of May till the end of July.

The Laboratory is also open daily from 10 A.M. till 4 P.M. for Pathological Research, under the direction of the Professor and his Assistants.

IX. PRACTICE OF PHYSIC.

PROFESSOR GRAINGER STEWART.

This Course comprises—

I. An account of the nature, and more particularly of the clinical characteristics, and the treatment of the different types of morbid action.

II. An account of the morbid anatomy, clinical history, causes, diagnosis, prognosis, and treatment of the diseases of the different systems and organs.

It is intended that each course shall be, as far as possible, complete; but that, while the general principles (included in Part I.) shall be fully discussed each session, the diseases of individual systems (included in Part II.,) shall be taken up in different order year by year, and certain systems selected for more minute consideration.

The course is illustrated by specimens from the Anatomical Museum of the University, and from the Professor's private collection, as well as by numerous drawings, diagrams, and charts.

TUTORIAL CLASS.

Practical instruction in connection with the Course is given to the members of the Class by the Assistant.

Text-Books.—Fagge's, Bristowe's, Bartholow's, Roberts, or Dr Frederick Taylor's "Practice of Medicine." Students are also advised to consult the Professor's "Introduction to the Study of Nervous Diseases," and Dr Graham Brown's, Drs Gibson and Russell's, or Dr Finlayson's works on Medical Diagnosis.

X. SURGERY.

PROFESSOR CHIENE.

Winter Session.

I. *Lectures*, 2 P.M. This course of lectures is devoted to a systematic consideration of the Principles and Practice of Surgery. It is intended that each course shall embrace, as far as possible, a complete view of the present aspects of the Science and Practice of Surgery.

Written examinations are held at stated periods, and at the end of the Session a practical examination is held on the work of the Tutorial Classes.

2. *Tutorial Instruction*, at hours most convenient for the students, includes—

- (a.) *Practical Instruction in Bandaging and the Treatment of Fractures and Dislocations* on the living subject. This class is divided into sections for Senior and Junior Students. The class for Senior Students is conducted by David Wallace, M.B.; the Class for Junior Students by Harold J. Stiles, M.B.
- (b.) *Demonstrations of Surgical Instruments and Appliances.*
- (c.) *Weekly Demonstrations on the Surgery of the Eye and Ear and on Surgical Pathology*, illustrated by museum specimens by David Wallace, M.B.
- (d.) *Weekly Revisal of the Lectures, together with Demonstrations of the Preparations in the Surgical Museum illustrative of the Lectures on Surgery* by Harold J. Stiles, M.B.
- (e.) *Demonstrations on the principles of Antiseptic Surgery* by David Wallace, M.B.
- (f.) *Lantern Demonstrations of Surgical Pathology* by Harold J. Stiles, M.B.

Summer Session.

The Summer Session is devoted to a consideration of Practical Aspects of Surgery. Special attention is given to Surgical Anatomy and Operative Surgery. The class meets daily during the months of May and June. During July the class is divided into sections for practical work. Oral examinations and tutorial instruction in the Treatment of Fractures and Dislocations, and in the uses of surgical instruments, form a special part of the course. Special demonstrations are given on Surgical Pathology.

The Surgical Laboratory is divided into two departments,—1st, Surgical Pathology; 2d, Bacteriology. It is open daily for original work during the Winter and Summer Sessions, under the superintendence of the Professor, assisted by Harold J. Stiles, M.B. Applications to be made to the Professor.

Text-Books—Winter Session.—The Professor's "Lectures on the First Principles of Surgery." Erichsen's "Science and Art of Surgery," 9th edition, by Marcus Beck.
Summer Session.—The Professor's "Lectures on Surgical Anatomy," and Jacobson's "Operative Surgery."

XI. MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

PROFESSOR SIMPSON.

The Course of Instruction comprises Lectures on—

I. The Anatomy and Physiology of the Female Organs of Reproduction.

II. The Physiology, Pathology, and Therapeutics of Pregnancy.

III. Parturition—Natural (Eutocia), and Morbid (Dystocia).

IV. The Hygiene, Pathology, and Therapeutics of the Puerperal State.

V. The Hygiene, Pathology, and Therapeutics of Infancy and Childhood.

VI. The Special Pathology and Therapeutics of the Female Organs of Reproduction.

One day in each week is devoted to the Gynecological Section of the Course; and the Diseases of Women may be studied clinically in the Royal Infirmary, in the Buchanan Medical Ward, in connection with the class of Clinical Medicine.

Midwifery may be studied clinically in the Royal Maternity, of which the Professor is, *ex officio*, one of the Medical Officers, and where he is in attendance during the first three months of the Winter Session. The Professor makes a special Clinical visit with the Students, who have taken the Maternity Ticket, on Saturdays, at the usual Lecture hour—10 A.M.; and he or one of the Assistant Physicians gives Clinical Instruction on Wednesday afternoons at 4 P.M.

After the Class-roll is made up, Tutorial classes are formed for Practical Instruction in the use of Obstetric and Gynecological Instruments and Appliances.

Medals and Certificates of Merit are awarded for answers at three Written Examinations held during the Session.

Summer Session.

A Course of Instruction in Obstetric and Gynecological Opera-

tions, with Demonstrations of the use of Instruments and Appliances, is conducted during the Summer Session at 10 A.M.

On Tuesdays and Fridays the Professor gives Lectures and Demonstrations. On the other days of the week the sections of the class are trained in the investigation and treatment of Female Diseases, and the members of the class have an opportunity of practising operations on lay figures.

Text-Books.—Playfair's, Lusk's, or Parvin's "Midwifery."

The Professor's "Contributions to Obstetrics and Gynecology." Hart and Barbour's "Manual of Gynecology."

SCHOLARSHIPS IN MIDWIFERY AND GYNECOLOGY.

The Buchanan Scholarship in Gynecology, and the James Scott Scholarship in Midwifery, are open to members of the class. For conditions, *see* "SCHOLARSHIPS IN MEDICINE."

XII. MEDICAL JURISPRUDENCE.

PROFESSOR SIR DOUGLAS MACLAGAN.

Part I.—Medical Jurisprudence.

MEDICAL EVIDENCE GENERALLY.

1. Documentary.
2. Oral.
3. Experimental—

Examination of the living ; identity ; Examination of the dead ; identity ; cause of death ; exhumations, autopsies.

MEDICAL EVIDENCE SPECIALLY.

Questions affecting Health or Life.

1. Assaults and Homicide—

Wounds and other external injuries ; asphyxia. Starvation. Heat and cold. Poisons.

2. Suicide.

3. Offences against Chastity—

Rape, &c. ; concealment of pregnancy ; criminal abortion ; infanticide.

4. Malpraxis and Neglect of Duty.

Questions affecting Civil Rights or Social States.

Marriage and Divorce. Impotence and sterility. Live birth;
Survivorship. Insanity. Feigned diseases.

Part II.—Medical Police. Public Health.

HYGIENE OF INDIVIDUALS.

Man—

Age and development. Sex. Constitution.

External Agencies—

Food and Drink. Air. Clothing. Ablutions. Exercise.

Habits and Modes of Life—

Temperance. Celibacy and Marriage. Professions : learned,
mechanical, criminal. Punishments. Prostitution.

Duration and Expectancy of Life—

Life Assurance.

HYGIENE OF COMMUNITIES.

Sanitary Administration.

Climate—

Causing disease ; remedying disease.

Towns, Camps, and Private Habitations—

Topographical position ; water supply ; heating and lighting ;
ventilation ; drainage and sewerage.

Public Buildings—

Schools ; churches ; hospitals ; theatres ; prisons.

Cemeteries. Quarantine Establishments. Epidemics ; Endemics.
Disinfectants.

Text-Books.—Taylor's "Medical Jurisprudence," Guy's "Principles of Forensic Medicine," Parkes' "Practical Hygiene," Wilson's "Handbook of Hygiene," Louis Parkes' "Hygiene," Wynter Blyth's "Manual of Public Health," Whitelegge's "Hygiene and Public Health," Smith's "Laws Concerning Public Health," Vesey Fitzgerald's "Epitome of the Laws affecting Health," Newsholme's "Vital Statistics," Dykes' and Stuart's "Manual of Public Health Acts."

Public Health Laboratory.

The Laboratory comprises three Departments, the Chemical Laboratory, the Bacteriological Laboratory, and a station for making meteorological observations, and the examination of emanations from the soil.

The Laboratories will be open daily during the Winter and Summer Sessions, from 10 to 4, under the superintendence of the Professor and Charles Hunter Stewart, M.B., B.Sc.

The work in these Laboratories will constitute an advanced course of instruction in the Methods of Hygienic investigation, and is intended for those who may desire to prepare themselves for taking the Degrees of Science in Public Health, or for the duties of Medical Officer of Health.

The Fees are £10, 10s. for the Winter, and £6, 6s. for the Summer Session.

XIII. CLINICAL SURGERY.

PROFESSOR ANNANDALE.

The objects of this Course are to teach the symptoms, diagnosis, and treatment of Surgical diseases and injuries as met with in the living body, and to point out modifications and complications which occur in connection with them. With these views patients are brought before the class in the special University Clinical Theatre of the Infirmary, and their conditions are carefully examined and discussed, due regard being taken to avoid anything likely to injure their feelings or in any way aggravate their disease. The history and nature of the case having been studied, the proper treatment is suggested and described, and is then either carried out at once or on the first convenient occasion. In addition to the regular lectures operations are performed in the Clinical Theatre, practical demonstrations are given in the wards of the Infirmary, and upon one day in the week the cases of patients attending the out-patient department are made a special consideration, so as to instruct the students in connection with the minor and more common surgical affections. Practical instruction as to the examina-

tion of patients, the observation of symptoms, the treatment of surgical emergencies, the use of instruments, the application of dressings, and other surgical details is given by the Clinical Tutor attached to the Chair, in small classes, which are free to all Students attending the Course.

Text-Books.—Spence, Erichsen, Holmes, Bryant, or other recent works on Surgery. Students are also advised to study some of the best works (old and new) on the special subjects of Practical Surgery.

XIV. CLINICAL MEDICINE.

PROFESSORS GRAINGER STEWART, FRASER, AND GREENFIELD,
WITH PROFESSOR SIMPSON FOR DISEASES OF WOMEN.

The course of Clinical Medicine, consisting of Clinical Lectures and Instruction in the University wards of the Royal Infirmary, is conducted conjointly by the Clinical Professors—all the Professors being on duty during both the Winter and Summer Sessions, the Professor of Midwifery giving lectures and demonstrations on Gynecological Medicine on certain days.

The Course consists of:—1. Practical Instruction on three days a week at the bedside. 2. Critical Expositions and Discussions of cases in the lecture-room on two days a week.

Every facility is afforded to members of the Class to act as Clinical Clerks, and those are preferred who have already had a course of tutorial instruction. At the close of each Summer Session, six gentlemen, who have at some time been members of the Class, are appointed to be Resident Physicians in the Clinical Wards during the following Winter and Summer Sessions.

CLINICAL TUTORIAL CLASS.

Practical instruction in the Methods of Physical Examination is given to the members of the Class by the University Clinical Tutors.

Junior Students are strongly advised to take this course of instruction along with their first course of Clinical Medicine.

LECTURESHIPS.

I. MENTAL DISEASES.

LECTURER—THOMAS S. CLOUSTON, M.D.

This course consists of—

1. Systematic Lectures in the University during the Summer Session on the Classification, Symptoms, Causes, and Treatment of Mental Diseases.

2. Pathological demonstrations, naked eye and microscopic, in the University and at the Royal Asylum, Morningside, of the Morbid Anatomy of Insanity. Students will have an opportunity of original investigation in the Pathological Museum of the Asylum.

3. Clinical instruction at the Royal Asylum, Morningside (West House), in all the forms of Mental Disease. Students have the opportunity of personally coming in contact with and examining the cases, so as to learn the modes of managing and dealing with patients labouring under Mental Disease, and they are exercised in the diagnosis of Insanity and the drawing up of certificates; the aim being to enable them to recognise its early stages, to distinguish its varieties, to adopt suitable treatment, and to advise the relatives as to the question of sending the patient to an asylum or not. There is a clinical field of 500 beds, comprising all the wards except those for private patients. This part of the course extends through the Summer and the last month of the Winter Session.

4. Instruction in regard to the medico-legal, hereditary, educational, and social relations of Mental Disease, and on its bearings and significance in ordinary medical practice.

There are Free Clinical Clerkships, tenable for three months, in the Royal Edinburgh Asylum, and in several other Asylums, in connection with the class.

Text-Book.—Dr Clouston's "Clinical Lectures on Mental Diseases."

II. DISEASES OF THE EYE.

SUBSTITUTE-LECTURER during DR ARGYLL ROBERTSON'S absence—GEORGE A. BERRY, M.B.

The course will consist—

1. Of systematic lectures delivered daily at 9 A.M. for seven weeks during the Summer Session, at which the symptoms, diagnosis, and treatment of the more important diseased conditions of the eye and its appendages will be discussed. The lectures will be illustrated by drawings, diagrams, &c.

2. Of clinical instruction daily at the Ophthalmic wards of the Royal Infirmary, where opportunities will be afforded for practising the use of the ophthalmoscope. Special practical instruction will be given in ophthalmoscopic affections and errors of refraction.

Text-Books.—Swanzy's "Handbook on Diseases of the Eye," Lawson on "Diseases and Injuries of the Eye," or Nettleship on "Diseases of the Eye."

Works of reference.—Berry's "Treatise on Diseases of the Eye." Meyer's "Practical Treatise on Diseases of the Eye," translated by Fergus. Landolt on the "Refraction and Accommodation of the Eye," translated by Culver. Gowers' "Medical Ophthalmoscopy."

III. CLINICAL INSTRUCTION ON DISEASE IN CHILDREN.

LECTURERS—JAMES CARMICHAEL, M.D., JOHN PLAYFAIR, M.B.

Two Courses, each of three months' duration, will be conducted annually, one during the Winter Session, and one during the Summer Session.

Each Course will include Clinical Instruction in the wards of the Royal Hospital for Sick Children, and in the University Clinical Medicine Theatre of the Royal Infirmary.

For the ward visits, the class will be divided into sections not exceeding thirty in number, and each section will attend the ward visits on at least one day of each week. The whole class will meet once in each week in the Lecture Theatre for clinical instruction.

IV. COMPARATIVE EMBRYOLOGY.

LECTURER—MR GEORGE BROOK.

Winter Session.

The Course consists of fifty meetings, which will be devoted in part to Lectures and in part to Practical Work and Demonstrations.

PART 1.—Sketch of the development of *Amphioxus*, the Frog, and the Chick, as a basis for Embryological Enquiry.

PART 2.—The principal facts in the development and life-history of the following groups (as illustrated by types):—Poriifera, Cœlenterata, Platyelminthes, Rotifera, Mollusca, Polyzoa, Brachiopoda, Chætopoda, Discophora, Gephyrea, Tracheata (including *Peripatus*), Crustacea, Echinodermata, Entero-pneusta, Urochordata.

PART 3.—Vertebrate Organogeny;—including an outline of the development of the fœtal appendages of Birds, Reptiles, and Mammals; the epidermis and its derivatives; the nervous system and sense organs; the skeletal, vascular, muscular, and urogenital systems; the alimentary canal and its appendages.

The Laboratory work will include a practical study of the development of the Chick, and instruction in the modern methods of research.

RESEARCH WORK.

The Laboratory is open daily in the Summer as well as in the Winter Session for the prosecution of Embryological Research.

Graduation in Medicine and Surgery.

[*Note.*—The Ordinance of the Scottish Universities Commissioners of 1889, No. 16 (Edinburgh No. 1), Regulations for Degrees in Medicine,¹ may come into operation in October 1892. Students who begin the study of Medicine after its ratification will be required to conform to the Regulations contained in it; but any Student who had previously begun the study of Medicine will be allowed to graduate under the system in force at the time when he began his studies, or under the system created by the new Ordinance, according as he shall comply with the Regulations of either the one or the other system.

As the Regulations contained in this proposed, but as yet unratified, new Ordinance harmonise with the Resolutions of the General Medical Council in respect to Preliminary Examination, subjects of the First Professional Examination, and length of the Curriculum of Study, the Faculty of Medicine recommend that all Students who now commence the study of Medicine should—

1. In the Preliminary Examination, pass *at one and the same time* in the subjects of English, Latin, Mathematics (including Arithmetic, Algebra, and the first three books of Euclid), and in one of the following optional subjects, viz.—Greek, French, German, Italian, any other modern language, or Logic. (Until the new Ordinance has received the approval of Her Majesty in Council, it is necessary that a second optional subject should be passed, but this may be deferred until any subsequent Examination previous to the first Professional Examination.)

2. Include Physics among the subjects of the first year's study, so as to be prepared for Examination in this subject at the first Professional Examination. (A class of Physics will be taught in the ensuing Summer Session.)

3. Adopt a five years' Curriculum of Study.]

Three Degrees in Medicine and Surgery are conferred by the University of Edinburgh—viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.) The Degree of Master in Surgery is not conferred on any person who does not at the same time obtain the Degree of Bachelor of Medicine.

These Degrees admit to the General Council of the Univer-

¹ See new Ordinance, Appendix, page 40.

sity, and to the Medical Register. They qualify for Practice throughout Her Majesty's dominions, and for admission to the Military, Naval, and other Public Medical Services in the United Kingdom.

All Candidates must give evidence of having obtained a satisfactory General Education.

STATUTES OF THE UNIVERSITY RELATIVE TO THE PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

I. The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and the proficiency of Students in these branches is ascertained by examination, prior to the commencement of their medical study (pp. 366).

II. No candidate is admitted to a professional examination who has not passed a satisfactory examination on at least two of the following subjects (in addition to the subjects mentioned above):—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the examination on these latter subjects also takes place before the candidate has entered on his Medical Curriculum (pp. 367 and 368; for the additional subjects required for the Degree of M.D., see p. 363).

III. A Degree in Arts (not being an Honorary Degree) in any one of the Universities of England, Scotland, or Ireland, or in any Colonial or Foreign University, specially recognised for this purpose by the University Court, exempts from all preliminary examination; and an Examination in Arts by any corporate body, whose examination has been recognised as qualifying for entrance on medical study by resolution of the General Medical Council of the United Kingdom, provided the said examination by the said corporate body shall be also approved by the University Court, shall exempt, *pro tanto*, from preliminary examination in Arts, on the subjects comprised in the said examination of the said corporate body. (See pp. 368 and 369).

STATUTES OF THE UNIVERSITY RELATIVE TO PROFESSIONAL EDUCATION AND EXAMINATION.

IV. No one is admitted to the DEGREES of BACHELOR of MEDICINE and MASTER in SURGERY who has not been engaged in Medical and Surgical study for four years—the Medical Session of each year, or *Annus Medicus*, being constituted by at least two courses of not less than one hundred lectures each, or

by one such course, and two courses of not less than fifty lectures each; with the exception of the Clinical Courses, in which lectures are to be given at least twice a week during the prescribed periods.

V. Every candidate for the Degrees of M.B. and C.M. must give sufficient evidence by certificates—¹

I. That he has studied each of the following departments of Medical Science, viz.,

ANATOMY, ...
CHEMISTRY, ...
MATERIA MEDICA, ...
INSTITUTES OF MEDICINE OR PHYSIOLOGY,
PRACTICE OF MEDICINE, ...
SURGERY, ...

MIDWIFERY, and the DISEASES peculiar to
WOMEN and CHILDREN; two Courses
of Midwifery, of Three Months each,
being reckoned equivalent to a Six
Months' Course, provided different de-
partments of Obstetric Medicine be
taught in each of the Courses, ...

GENERAL PATHOLOGY, or in Schools where
there is no such Course, a Three Months'
Course of Lectures on Morbid Anatomy,
together with a Supplemental Course of
Practice of Medicine or Clinical Medicine,

During Courses
including not less
than One Hundred
Lectures.

PRACTICAL ANATOMY, ... { A Course of the same duration as
those of not less than One Hun-
dred Lectures above prescribed.²

PRACTICAL CHEMISTRY, ... Three Months.

CLINICAL MEDICINE, ... { Courses of the same duration, as
those of not less than One Hun-
dred Lectures above prescribed, or
CLINICAL SURGERY,³ { Two Courses of Three Months,
Lectures being given at least
twice a week.

¹ No Course of Lectures will be allowed to qualify unless the Lecturer certifies that it has embraced at least 100 lectures or 50 lectures, in conformity with the requirements of this section. Three Months' courses on Materia Medica, Pathology, and Midwifery do not qualify.

² Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the degree of care with which the dissections have been made. Students are recommended not to appear for examination in Anatomy, with a view to a Degree, until they have dissected the human body at least once.

³ The Faculty of Medicine recommend that Medical Students do not attend Clinical Surgery during their first six months' attendance on Clinical Medicine.

MEDICAL JURISPRUDENCE, ...	{ During Courses in-
BOTANY, ...	
NATURAL HISTORY, including ZOOLOGY, ...	
	cluding not less than Fifty Lectures.

2. That he has attended for at least two years the Medical and Surgical Practice of a General Hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons.

3. That he has attended during a Course of not less than fifty hours' instruction the Class of Practical Materia Medica and Pharmacy in the University of Edinburgh, or a similar class conducted in a University or recognised School of Medicine, or a similar Class conducted at the Laboratory of an Hospital or Dispensary, or elsewhere, by a Teacher recognised by the University Court under Section VI. Subsection (4) ; or, that he has been engaged by apprenticeship,¹ for not less than two years, with a Registered Medical Practitioner, or a Member of the Pharmaceutical Society of Great Britain, or a Member of the Pharmaceutical Society of Ireland, or a Pharmaceutical Chemist, or Chemist and Druggist, registered under the provisions of the "Act for regulating the qualifications of Pharmaceutical Chemists, 1852," "The Pharmacy Act, 1868," or "The Pharmacy Act (Ireland), 1875," in the *bona fide* compounding and dispensing of Drugs, and the preparation of their official and other Preparations under his superintendence.

4. That he has attended, for at least six months, by apprenticeship or otherwise, the *out-practice* of an Hospital, or the practice of a Dispensary, Physician, Surgeon, or Member of the London or Dublin Society of Apothecaries.

5. That he has attended at least twelve cases of labour under the superintendence of a registered Medical Practitioner ; or that he has attended six such cases, and also has attended for at least three months the practice of a Midwifery Hospital in which practical instruction is regularly given.

6. That he has attended, during courses of not less than fifty hours' instruction, Classes of Practical Physiology and Practical Pathology in the University of Edinburgh, or in a University or School of Medicine recognised by Subsections (2) and (4) of Section VI. of Ordinance No. 8, Edinburgh No. 3, or upon Classes thereof, conducted by a Teacher recognised by the University Court under the said Subsection (4).

VI. The studies of candidates for the Degrees of Bachelor of Medicine and Master in Surgery are subject to the following Regulations :—

1. One of the four years of Medical and Surgical study, required by Section IV., must be in the University of Edinburgh.

¹ Apprenticeship, Dispensary or Hospital Practice, Practical Midwifery, and Vaccination are not reckoned as *Classes* in making up an *Annus Medicus*.—See Regulation as to Vaccination at p. 376.

2. Another of such four years of Medical and Surgical study must be either in the University of Edinburgh, or in some other University entitled to give the Degree of Doctor of Medicine.

3. Attendance during at least six winter months on the Medical or Surgical Practice of a General Hospital, which accommodates at least eighty patients, and, during the same period, on a course of Practical Anatomy, may be reckoned as one of such four years, and to that extent shall be held equivalent to one year's attendance on Courses of Lectures as above prescribed.

4. One year's attendance on the Lectures of Teachers of Medicine in the Hospital Schools of London (including the Professors in the Faculty of Science, in subjects required for graduation, in King's College and University College, London), or in the School of the College of Surgeons in Dublin, or of such Teachers of Medicine in Edinburgh, or elsewhere, as shall from time to time be recognised by the University Court,¹ may be reckoned as one of such four years, and to that extent shall be held as attendance on Courses of Lectures as above prescribed.

5. Candidates may, to the extent of Four of the Departments of Medical Study required by Section V., Subsection 1, attend in such year or years of their Medical and Surgical studies, as may be most convenient to them, the Lectures of the Teachers of Medicine specified in the foregoing Subsection 4.

[Thus, Students of Medicine in the London Schools and in the School of the College of Surgeons in Dublin can obtain there two *Anni Medici* out of the four required for the Edinburgh Degrees in Medicine. Courses of Lectures in these Schools, and the Courses of the Medical Teachers and of the Science Teachers in King's College and in University College, London, in the Subjects of Graduation, are regarded as equivalent to Lectures on the corresponding subjects in this University, except *Materia Medica* and Midwifery, which, when only three months' Courses, are not received as equivalent. One *Annus Medicus* may be constituted by attendance on Practical Anatomy and Hospital Practice during the Winter Session. Another *Annus Medicus* by attending either, (a), full Winter Courses on any two of the following subjects: Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (b), on one such Course and two three months' Courses on any of the following subjects: Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the Student selects the arrangement prescribed in (a), attendance on a third Course, although unnecessary to constitute an *Annus*, will also be accepted. The other subjects, and the additional Courses, not given in London or Dublin, necessary for the degrees of the University, require to be attended at this University.

¹ See pp. 380-383.

In Provincial Schools, where there are no Lecturers recognised by the University Court, a Candidate can have only One *Annus Medicus*, and this is constituted by attendance on a Qualified Hospital along with a course of Practical Anatomy, but in a Provincial School where there are two or more Lecturers recognised by this University, a Second *Annus Medicus* may be made by attendance on at least two six months', or one six months' and two three months', recognised Courses.

6. All candidates not Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.

7. The Fee for attendance on the Lectures of an Extra-Academical Teacher in Edinburgh, with a view to Graduation, must be of the same amount as that exigible by Medical Professors in the University.

[*The Fee must be paid at the commencement of the Course.*]

8. No Teacher is recognised who is at the same time a Teacher of more than one of the prescribed branches of study, except in those cases where Professors in the University are at liberty to teach two branches.

9. It is not necessary for any Teacher, attendance on whose Lectures was recognised before 1861 for the purposes of Graduation in the University, to obtain a new recognition from the University Court; and attendance on the Lectures of every such Teacher will continue to be recognised as heretofore.

10. It is in the power of the University Court, if they shall see cause, at any time to withdraw or suspend the recognition of any Teacher or Teachers.

VII. Every Candidate must deliver, before the 31st day of March of the year in which he proposes to Graduate, to the Dean of the Faculty of Medicine—

1. A declaration, in his own handwriting, that he has completed his twenty-first year, [or that he will have completed it on or before the day of Graduation,] and that he will not be, on the day of Graduation, under articles of apprenticeship to any Surgeon or other master. (This declaration, along with a statement of studies, is appended to the Schedule for the Final Examination, and must be signed before the Schedule is given in.)

2. A statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

VIII. Each candidate is examined, both in writing and *viva*

voce—*Firstly*, on Chemistry, Botany, and Natural History ;¹ *Secondly*, on Anatomy, Institutes of Medicine, Materia Medica [including Practical Pharmacy and Prescribing], and Pathology ; *Thirdly*, on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence ; *Fourthly*, Clinically on Medicine and on Surgery in an Hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History [Materia Medica and Pathology] are conducted, as far as possible, by demonstrations of objects placed before the candidates.

IX. Students who profess themselves ready to submit to an examination in the first division of these subjects may be admitted to examination therein at the first period of examination after they have completed their attendance on the necessary classes : provided always that it shall be lawful for students to proceed to examination in the said subjects under one or more of the following subdivisions, namely—(a) Botany and Natural History, (b) Chemistry (including Practical Chemistry), (c) Botany and Chemistry (including Practical Chemistry), or (d) Natural History and Chemistry (including Practical Chemistry), at the first period of examination after they have completed attendance on the relative classes ; and to proceed to examination in the remaining subject or subjects at a subsequent period of examination.¹

X. Students who have passed their examination on the first division of these subjects, may be admitted to examination on the second division at the end of their third year.

XI. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *Annus Medicus*.

XII. Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of their fourth year.²

¹ Physics is now required by the Regulations of the General Medical Council. See Outline of Examinations, page 375.

² See note 1, page 333.

[Thus, Candidates for the First Professional Examination, after they have completed attendance on the necessary Classes, may appear for Examination in all the subjects, or they may appear for Examination in one or more of the separate sub-divisions mentioned in Section IX. ; for the Second Professional Examination attendance for three complete *Anni Medici* is required ; and for the Final Professional Examination, four complete *Anni Medici* are required. Qualifying courses must have been attended on all the subjects of each division or sub-division of Examination previously to the Candidate being admitted to examination in that division.]

XIII. If any candidate at these examinations be found unqualified, he cannot be again admitted to examination unless he has studied, during another year, two of the prescribed subjects,¹ either in the University, or in some other School of Medicine.

XIV. After the candidate has satisfied the Medical Examiners, the Dean will lay the proceedings before the *Senatus Academicus*, by whose authority the candidate will be admitted on the first day of August, or, if that day be Sunday, then on the following day, to the Degrees of Bachelor of Medicine and of Master in Surgery.

XV. The *Senatus Academicus*, on the day here appointed, will assemble at ten o'clock A.M., for the purpose of conferring Degrees ; and no candidate, unless a sufficient reason be assigned, shall absent himself, on pain of being refused his Degree for that year.

XVI. Candidates for Graduation are required to produce evidence of their having conformed to the Regulations which were in force at the time they commenced their Medical Studies.

XVII. The Degree of DOCTOR OF MEDICINE may be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Master in Surgery, and is of the age of twenty-four years, and produced a certificate of having been engaged subsequently to his having received the Degrees of Bachelor of Medicine and Master in Surgery, for at least two years in

¹ Satisfactory Certificates must be produced as evidence of such study.

attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice:

Provided always that the Degree of Doctor of Medicine shall not be conferred on any person, unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as are above specified [Section III.], or unless he shall, before or at the time of his obtaining the Degrees of Bachelor of Medicine and Master in Surgery, or thereafter, have passed a satisfactory examination on *three* of the subjects mentioned in Section II. of the Statutes relative to Preliminary Examination. Two of these must be Greek, and either Logic or Moral Philosophy, and the third must be one of the following subjects at the option of the Candidate—namely, French, German, Higher Mathematics, and Natural Philosophy.

And provided also that the candidate for the Degree of Doctor of Medicine shall submit to the Faculty of Medicine a Thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the Degrees of Bachelor of Medicine and Master in Surgery, which he may have made a subject of study after having received those Degrees. The Candidate must lodge his Thesis with the Dean on or before 30th April of the year in which he proposes to graduate. No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum for the Bachelor's and Master's Degrees; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the Candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.¹

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. (under the new Statutes), but who cannot appear personally to

¹ Candidates are required to write their Theses on faint lined paper, 11 in. by 8½ in. with margins 1½ in. at each side. The Thesis is to be written on one side of each leaf only.

receive the Degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the Degree conferred on them in absence.

XVIII. The Medical Examiners for all candidates for Graduation in Medicine are the Professors in the Faculty of Medicine, along with the thirteen non-professorial Examiners appointed annually by the University Court.

XIX. The provisions of these Statutes came into operation on the 4th of February 1861.

XX. Persons who began their medical studies before the 4th of February 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

The Preliminary Examinations in General Education are held in the Examination Hall in the University.¹

All Candidates are required to enter their names *in full* in a book, kept for the purpose at the Office of the Faculty of Medicine, University New Buildings, and at the same time to mention the subject or subjects in which they offer themselves for Examination. They are also required to state whether they have before appeared for any Preliminary Examinations at this University.

Students Matriculated for the academic year in which the Examinations take place (*1st October to 1st October*), and who have entered their names at the time required by the Regulations, will be admitted to the Examination without payment of the special fee, but they are required to present their

¹ A Local Centre has been established at the University College of North Wales, Bangor, where examinations in the Preliminary Subjects will be held on the same days and hours as in Edinburgh. An additional fee of 5s. is payable by each Student undergoing examination at Bangor. This fee admits to examination in March and October in any one year, and is payable to the Registrar at Bangor on or before 1st October or 23rd February for the examinations in October and March respectively.

Matriculation Tickets at the Examination Hall. Matriculation for 1892-93 will begin on 1st October, and Candidates may Matriculate up to the date of Examination, provided they have entered their names for the Examination at the time stated. Non-Matriculated Students pay a Fee of Ten Shillings each, and are admitted on showing their Receipts at the Examination Hall. Those who pay the Fee in March will be admitted to the Examination in October without farther payment, on showing their tickets of admission. Payment in October does not exempt from payment in March. See dates of entering for the Examinations page 378.

Any Candidate who cannot appear personally at the time fixed to enter his name and pay the fee, can, on application to the Clerk at the Faculty of Medicine Office, University New Buildings, obtain a schedule, which he should fill up, and, in the case of no fee being payable, return to him. When a fee is payable, the schedule and a *crossed Post Office Order* or *Postal Order* for the Fee, should be transmitted to the *Chief Clerk of the University Court*, who is alone authorised to receive the fees and grant receipts.

I. In conformity with Section I. of the Statutes (see p. 356) examinations on the Preliminary Branches of Extra-Professional Education will take place on Tuesday, Wednesday, Thursday, and Friday, the 4th, 5th, 6th, and 7th October 1892; and on Tuesday, Wednesday, Thursday, and Friday, the 7th, 8th, 9th, and 10th March 1893.

Examination on Tuesdays.—Arithmetic, 9 to 11 A.M.; Mathematics (Geometry, Algebra), 11.30 A.M. to 1.30 P.M.; Higher Mathematics, 2 to 4 P.M.

Examination on Wednesdays.—English, 9 to 11 A.M.; Natural Philosophy, 11.30 A.M. to 1.30 P.M.; Mechanics, 2 to 4 P.M.

Examination on Thursdays.—Latin, 9 to 11 A.M.; Logic, 11.30 A.M. to 1.30 P.M.; Moral Philosophy, 2 to 4 P.M.

Examination on Fridays.—Greek, 9 to 11 A.M.; French, 11.30 A.M. to 1.30 P.M.; German, 2 to 4 P.M.

SUBJECTS OF EXAMINATION FROM OCTOBER 1892 TO MARCH 1894,
INCLUSIVELY.¹

1. *English*.—The Examination will include:—(1.) Writing a passage of English from dictation; (2.) English Composition, with the correction of sentences of bad English; (3.) Questions in English Grammar, with analysis of sentences and the derivation and definition of some common English words, special regard being had to discrimination of Synonyms (Davidson's "*English Words Explained*" recommended); (4.) Questions in Geography and History, especially in the Geography and History of the British Islands and India, and the History of English Literature. Exceptionally bad answers to the History and Geography Questions may cause the rejection of a Candidate in English. Candidates who have passed a qualifying Examination either in English (including Grammar, &c.) only, or in History and Geography only, will be allowed to take *separately* the portions in which they have not qualified, provided they give their paper to the Examiner at the end of half of the prescribed time.
2. *Latin*.—For October 1892 and March 1893, Livy, Book XXI. For October 1893 and March 1894, Cicero, *De Senectute*. An easy passage will be set from a Latin prose author not prescribed; and a single passage of English (translated from a Latin author) to be re-translated into Latin—the more difficult Latin words being given.
3. *Arithmetic*.—The Common Rules, including Vulgar and Decimal Fractions, Simple and Compound Interest, Discount, Stocks, &c.
4. *Elements of Mathematics*.—Geometry, Euclid, Books I., II., and III., or Wilson's *Elementary Geometry*, Books I., II., III., or Books I., II., III. of the Text Book issued by the Association for the Improvement of Geometrical Teaching (Parts I. and II.). The Elementary Rules of Algebra, including Simple Equations. A knowledge of Geometry alone or of Algebra alone will not be sufficient. Candidates who have passed a qualifying Examination in Geometry only, or in Algebra only, will be allowed to take *separately* the subject in which they have not qualified.

¹ See Regulations of the General Medical Council as to Registration of Students of Medicine, page 371. All the subjects required for Registration are required to be passed at one examination. The additional subjects required for Degrees in Medicine and Surgery in this University may be passed at the same time, or at any future Preliminary Examination before the candidates appear for the First Professional Examination. See also pages 355 and 356.

5. *Elements of Dynamics (Mechanics)*.—Elementary Kinematics, Statics, including the Simple Machines, Kinetics, and Hydrostatics. Text Book: Blaikie's *Elements of Dynamics* (excluding the appendix).

II. In conformity with Section II. of the said Statutes (see p. 356), which enacts that no candidate shall be admitted to a professional examination who has not passed a satisfactory examination on at least *two* optional subjects (in addition to the subjects mentioned above), examinations will also take place on the following subjects:—

1. *Greek*.—For October 1892 and March 1893, Xenophon, *Cyropaedia*, Book VII. For October 1893 and March 1894, Xenophon, *Memorabilia*, Book II. Some easy sentences of English will be set to be translated into Greek.
2. *French*.—Xavier de Maistre, *La jeune Sibérienne*, and *Le lépreux de la cité d'Aoste*. An easy passage in English will be given for translation into French.
3. *German*.—Homann, "Deutsche Märchen," Nos. 1-7. An easy passage in English will be given for translation into German.
4. *Higher Mathematics*.—Geometry, Euclid, Books I.-IV., Book VI., and the Propositions of Book XI., usually given in the modern editions, or Wilson's *Elementary Geometry*, Books I., II., III., V., and Wilson's *Solid Geometry and Conic Sections*, Book IV., Section I.—Algebra, Elementary Trigonometry, and Conic Sections. Text Book for Conic Sections, Wilson's *Solid Geometry and Conic Sections*, Book V. The use of the above text books is not imperative; they are cited merely to indicate the scope of the examination.
5. *Natural Philosophy*.—(1.) Properties of matter—Elasticity, Density, Porosity, Capillarity, &c. (2.) Elementary phenomena of Sound, Light, Heat, Electricity and Magnetism. Text-Books recommended—Balfour Stewart's *Elementary Physics*, and Tait's *Properties of Matter*.
6. *Logic*.—Either Fowler's *Deductive Logic*, "Introduction," Parts I., II. (chap. i.-iv.), III. (chap. i., ii., iii., and viii.), Davidson's *Logic of Definition* (chap. i., ii., iii.), and Fowler's *Inductive Logic*, chap. i., ii. (§§ 2 and 3), iii., iv.; or Professor Campbell Fraser's *Selections from Berkeley*, Editor's "Historical Introduction," Author's "Introduction to the Principles of Human Knowledge," and "Dialogue on Divine Visual Language," along with the Prefatory Note, pp. 159-166 (4th edition).

7. *Moral Philosophy*.—(1.) Bain's *Mental and Moral Science*, Book III. ("The Emotions"), chap. i., iv., v., vii., viii.;
- (2.) Professor Calderwood's *Handbook of Moral Philosophy*, "Introduction," "Psychology of Ethics," Parts I. (chap. i.-vi.) and IV., together with "Sketch of the History of Moral Philosophy," Socrates to Kant.

In answering the questions in Arithmetic, Mathematics, and Dynamics (Mechanics), the steps of the reasoning, as well as the final result, must be exhibited.

A Degree in Arts in any one of the Universities of the United Kingdom, or in one of the Colonial Universities, or Universities of British India, exempts from the Preliminary Examination.

The Preliminary Examinations in General Education of the following Bodies are recognised *pro tanto*; that is to say, they exempt from examination on the subjects comprised in them, in so far as the examinations are of the same extent as those required by this University. Any subjects required by the Regulations, and not included in these examinations, or not carried out to the requisite extent, must be passed at the University. See Regulations of General Medical Council as to Registration, page 371.

As regards Latin, Greek, French, and German, mere translation is not sufficient. There must be translation of an English passage into each of the languages taken up by the Candidates.

Mathematics must in all cases be equivalent in Geometry to at least the first three Books of Euclid.

As regards Optional Subjects, each of them must be certified; and in so far as they are of the nature and extent required by the University, they will be allowed to qualify.

No Examination of any other Board will be received on any subjects in which Candidates have been remitted at this University.

In all cases Candidates must produce Certificates of having passed such Examinations, with an official notice of the subjects in which they have passed, and of the extent of the Examination in each subject.

In all cases where the Certificates have been granted on the aggregate of the marks obtained by the Candidates the Official Certificate of the percentages in each subject must be produced. Candidates will not be exempted from Examination in any subject in which they have not passed in the Standard required at this University.

UNIVERSITIES WHOSE DEGREES IN ARTS EXEMPT FROM THE PRELIMINARY EXAMINATION OF THIS UNIVERSITY, AND UNIVERSITIES AND OTHER BODIES WHOSE EXAMINATIONS IN GENERAL EDUCATION ARE RECOGNISED *pro tanto*; PROVIDED ALWAYS THAT THE REGULATIONS OF THE GENERAL MEDICAL COUNCIL REGARDING THE REGISTRATION OF STUDENTS OF MEDICINE BE COMPLIED WITH. SEE THE REGULATIONS OF THE GENERAL MEDICAL COUNCIL ON THE SUBJECT, PAGE 371.

I.—UNIVERSITIES OF THE UNITED KINGDOM.

OXFORD.—Examination for a Degree in Arts ; Responsions ; Moderations ; Local Examinations (Senior), Certificate to include Latin and Mathematics ; Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects—viz., Greek, French, German. Oxford and Cambridge Schools' Examinations, Certificate to include English Grammar and Orthography, Arithmetic, Algebra, Geometry, Latin, and one of the following optional subjects—viz., Greek, French, and German.

CAMBRIDGE.—Examination for a Degree in Arts ; Previous Examination ; Local Examinations (Senior), Certificate to include Latin and Mathematics ; Local Examinations (Junior), Certificate to include Latin and Mathematics, and also one of the following optional subjects—viz., Greek, French, German ; Higher Local Examinations. Oxford and Cambridge Schools' Examinations, Certificate to include English Grammar and Orthography, Arithmetic, Algebra, Geometry, Latin, and one of the following optional subjects—viz., Greek, French, German.

DURHAM.—Examination for a Degree in Arts ; Examination for students at the end of their first year ; Examination for Certificate of Proficiency.

LONDON.—Examination for a Degree in Arts or Science ; Preliminary Scientific (M.B.) Examination ; Matriculation Examination.

EDINBURGH, GLASGOW, ABERDEEN, AND ST ANDREWS.—Examination for a Degree in Arts ; Preliminary Examination for Graduation in Medicine and Surgery ; Local Examinations (Senior or Junior), Certificate to include English Literature, Arithmetic, Algebra, Geometry, Latin, and also one of the following optional subjects—viz., Greek, French, German ; Preliminary Examination for Degrees in Science in the University of Edinburgh.

VICTORIA UNIVERSITY.—Preliminary Examination ; Entrance Examination in Arts—both Examinations to include all the subjects required for Registration.

DUBLIN.—Examination for a Degree in Arts; Public Entrance Examination; General Examination at end of Senior Freshman Year.

ROYAL UNIVERSITY OF IRELAND.—Examination for a Degree in Arts; Matriculation Examination.

II.—OTHER EXAMINING BODIES IN THE UNITED KINGDOM.

EDUCATIONAL INSTITUTE OF SCOTLAND.—Medical Preliminary Examination.

COLLEGE OF PRECEPTORS.—Examination for a First-class Certificate, or Second-class Certificate of First or Second Division, Algebra, Geometry, Latin, and a Modern Language having been taken.

INTERMEDIATE EDUCATION BOARD OF IRELAND.—Junior, Middle, and Senior Grades, Certificate in each case to include all the subjects required for Registration.

SCOTTISH EDUCATION DEPARTMENT.—Leaving Certificates in each Grade and in Honours.

III.—INDIAN, COLONIAL, AND FOREIGN UNIVERSITIES AND COLLEGES.

UNIVERSITY OF (1) CALCUTTA, (2) MADRAS, and (3) BOMBAY.—Entrance Examination, Certificate to include Latin.

UNIVERSITIES OF (1) M'GILL COLLEGE, MONTREAL; (2) BISHOP'S COLLEGE, MONTREAL; (3) TORONTO; (4) TRINITY COLLEGE, TORONTO; (5) QUEEN'S COLLEGE, KINGSTON; (6) VICTORIA COLLEGE, UPPER CANADA; (7) HALIFAX, NOVA SCOTIA; and (8) FREDERICTON, NEW BRUNSWICK, Matriculation Examination.

UNIVERSITY OF MOUNT ALLISON COLLEGE, NEW BRUNSWICK.—Examination for a Degree in Arts.

UNIVERSITY OF KING'S COLLEGE, NOVA SCOTIA.—Matriculation Examination; Responsions.

DALHOUSIE COLLEGE AND UNIVERSITY, HALIFAX.—Matriculation and Sessional Examinations.

WESTERN UNIVERSITY OF ONTARIO.—Entrance Examination in Medicine, Certificate to include all the subjects required for Registration.

UNIVERSITY OF MANITOBA.—Previous Examination.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.—Preliminary Examination, Certificate to include all the Subjects required for Registration.

PROVINCIAL MEDICAL BOARD OF NOVA SCOTIA.—Matriculation Examination.

UNIVERSITY OF MELBOURNE.—Matriculation Examination.

UNIVERSITY OF SYDNEY.—Matriculation Examination.

UNIVERSITY OF THE CAPE OF GOOD HOPE.—Matriculation Examination; Examination for a Degree in Arts.

UNIVERSITY OF ADELAIDE.—Matriculation Examination ; or its substitute, the Senior or Junior Public Examination, Certificate to include all the Subjects required for Registration.

CODRINGTON COLLEGE (BARBADOS).—English Certificate for Students of two years' standing, and Latin Certificate, or "Testamur."

TASMANIAN COUNCIL OF EDUCATION.—Examination for the Degree of Associate of Arts, Certificate to include Latin and Mathematics.

UNIVERSITY OF NEW ZEALAND.—Entrance Examination.

UNIVERSITY OF OTAGO.—Preliminary Examination.

CHRIST'S COLLEGE, CANTERBURY, NEW ZEALAND. — Voluntary Examinations, Certificate to include all the subjects required for Registration.

CEYLON MEDICAL COLLEGE.—Preliminary Examination (Primary Class).

GERMANY AND OTHER CONTINENTAL COUNTRIES. — Gymnasial Abiturienten-Examen, and corresponding Entrance Examinations to the Universities.

GENERAL MEDICAL COUNCIL REGISTRATION OF STUDENTS OF MEDICINE.

According to the Regulations of the General Medical Council of the United Kingdom, all Medical Students must register in the Medical Students' Register of the General Medical Council before they can be admitted to any Professional Examination. Whenever they have passed the Preliminary Examination in the required subjects, and commenced Medical Study at a recognised Medical School, or at a recognised University or Teaching Institution, where subjects of the Medical Course are taught, they should register not later than 15 days from the commencement of Study, and should not neglect this requirement. Forms of application for Registration may be obtained from James Robertson, Registrar of the Branch Council for Scotland, 1 George Square, Edinburgh, or at the Office of the Faculty of Medicine, University New Buildings.

Students who commenced Medical Study before January 1st, 1892, must previously have passed (at one or more Examinations) in the subjects of General Education, as follows :—(1.) English Language, including Grammar and Composition. (2.) Latin, including Grammar, Translation from specified Authors, and Translation of easy passages not taken from such Authors. (3.) Elements of Mathematics, comprising (a) Arithmetic, including Vulgar and Decimal Fractions ; (b) Algebra, including Simple Equations ; (c) Geometry, including the first book of Euclid, with easy questions on the subject-matter of the same. (4.) Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics. (5.) One of the following Optional Subjects :—(a) Greek, (b) French, (c) German, (d) Italian,

(*c*) any other Modern Language, (*f*) Logic, (*g*) Botany, (*h*) Zoology, (*i*) Elementary Chemistry.

Students who commence Medical Study after January 1st, 1892, shall have previously passed in the subjects of General Education, as follows:—(1.) English Language, including Grammar and Composition. (2.) Latin, including Grammar, Translation from specified Authors, and Translation of easy passages not taken from such Authors. (3.) Mathematics, comprising (*a*) Arithmetic; (*b*) Algebra, as far as Simple Equations, inclusive; (*c*) Geometry, the subject-matter of Euclid, Books I., II., and III., with easy deductions. (4.) One of the following Optional Subjects:—(*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other Modern Language, (*f*) Logic.

The entire Examination must be passed *at one time*, except in the case of Examinations passed for graduation in Arts of any of the Universities recognised, or in the case of Students who have, prior to January 1st, 1892, passed in part of a recognised Preliminary Examination.

The Preliminary Examinations recognised by the General Medical Council are only recognised by this University *pro tanto*. For Subjects and extent of Examination required by this University, see pp. 356-368.

A Student who has not been able to register, and who begins his Medical Studies in Summer, may matriculate, and attend the classes of Botany and Natural History. He must, however, pass a sufficient preliminary examination in October, to entitle him to be registered at the beginning of the Winter Session.

No one can be placed on the Register as a Practitioner who has not been a registered Student for at least five years.

MATRICULATION, &c., OF STUDENTS.

All Students are required to take their tickets for each course of Lectures, which they propose to attend, not later than fifteen days after the commencement of the course, and they must matriculate before they can be enrolled in any of the Classes in the University. Matriculation consists in paying during each year of study an entrance fee of £1 to the University, and in inscribing the name in the Students' Album. The matriculation fee for a Summer Session is 10s.

All Candidates for Degrees, not Students of the University, availing themselves of the permission to attend the Classes of Extra-Academical Teachers in Edinburgh, must conform to Ordinance vi. 6, p. 360.

Every Candidate for Degrees in Medicine and Surgery must matriculate at the University for the year in which he appears for Professional Examination or for Graduation. He should intimate his intention to graduate, and pay the Fee of £1 for Registration as a member of the University General Council (if not already a member) at least ten days before the date of Graduation.

REGULATIONS AS TO CLASS EXAMINATIONS.

With a view to promote the Educational interests of the students during the time they are occupied with the respective subjects in the Classes, the Senatus recommend :—

1. That there should be at least two Special Class-Examinations in the Classes in the Faculty of Medicine during each Session, conducted by means of questions and written answers, without aid from books or notes.

2. That in the event of a student gaining 75 per cent. or more of the available marks in any department, he shall obtain a Certificate in the First Class of Honours.

3. That in the event of a student gaining 50 per cent. or more, but less than 75 per cent., of the available marks in any department, he shall receive a Certificate in the Second Class of Honours.

University Bronze Medals are also given for Competitive Class Examinations.

CERTIFICATES OF ATTENDANCE ON CLASSES IN THE FACULTY OF MEDICINE.

The Senatus Academicus have resolved that the Certificates of Attendance to be granted to students in the Faculty of Medicine shall be regulated in the following manner :—

Each Professor shall ascertain the presence of his pupils at least twenty-six times in a course of six months' duration, and thirteen times in a course of three months' duration.

Those who have been absent twelve or more times in a six months' course, or six or more times in a three months' course, shall not be entitled to any Certificate.

The following is the form of Certificate which must be adopted in all cases :—

“I certify that Mr _____ attended my Course of Lectures
on _____ during the Session _____ ; that attendance was ascer-
tained _____ times, and that Mr _____ was present
on _____ of these occasions.”

Exceptions will be admitted in the case of those who may be absent from sickness or other unavoidable causes, the particulars of which must be stated to the Professor in writing, accompanied with certificates. All excuses for non-attendance must be given in immediately upon the student returning to his class. But if any student shall have been absent for six weeks or upwards, in a Course of six months, or for three weeks in a Course of three months (whatever the cause of absence may be), his

case must be transmitted to the Dean of the Faculty for the decision of the Faculty.

Whenever the student's cause for absence shall be admitted by the Professor or by the Faculty, the Certificate shall bear that he "attended," and shall state the amount of the irregularity and the nature of the excuse.

FIRST PROFESSIONAL EXAMINATION.

The Faculty of Medicine have resolved that the written and oral examinations on Chemistry, Botany, Natural History, and Physics shall be restricted in the following manner :—

1. *Chemistry*.—Classification of Elements. General Laws of Chemical Combination and Action, as illustrated in the simpler compounds of the more commonly occurring elements.

Symbolic Notation.

Preparation and Properties of the Non-Metallic Elements and their chief Compounds. Atomic Theory. Combining Volumes of Gases. Relation of Volume of Gas to Temperature and Pressure.

General Properties of Acids, Bases, and Salts—Electrolysis of Salts. Oxygen, Ozone, Oxidation, and Reduction.

Hydrogen, Water, Peroxide of Hydrogen, Chlorine, Hydrochloric Acid, Hypochlorites, Chlorates, Bromine, Hydrobromic Acid, Iodine, Hydriodic Acid, Iodates, Fluorine, Hydrofluoric Acid. Sulphur, Sulphuretted Hydrogen, Oxides of Sulphur, Sulphites, Sulphates, Thio-sulphates, Nitrogen, The Atmosphere, Oxides of Nitrogen, Nitrates, Nitrites, Ammonia, Ammonium Salts, Phosphorus, Oxides of Phosphorus, Chlorides and Oxychloride of Phosphorus, Phosphates, Phosphites, Hypophosphites, Boron, Boracic Acid, Borates, Silicon, Silica, Silicates, Chloride of Silicon, Fluoride of Silicon, Hydrofluosilicic Acid.

Carbon, Oxides of Carbon, Carbonates, Phosgene. Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform. Methylic and Ethylic Alcohols and Ethers. Methylamine, Dimethylamine, Trimethylamine, Tetramethylammonium. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Products of Distillation of Wood and of Coal. Benzene, Benzoic Acid, Salicylic Acid, Oil of Bitter Almonds. Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea.

The following metals, their Oxides, Sulphides, and more important Salts. Potassium, Sodium, Magnesium, Calcium, Strontium, Barium, Aluminium, Zinc, Manganese, Chromium, Iron, Bismuth, Lead, Copper, Mercury, Silver, Tin, Gold, Platinum, Antimony, Arsenic.

Simple Qualitative Analysis. [*The Examination in Analysis is conducted practically.*]

2. *Botany*.—The characteristic features of the following groups and classes of the vegetable kingdom :—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts of Morphology (including Anatomy, Histology, and Development) and Physiology as they are illustrated in the life-history of the following plants :—Bacterium, Saccharomyces, Mucor, Vaucheria, Eurotium, Funaria, Aspidium, Pinus, Scilla, Helianthus, Ulmus; and the characters of plants belonging to the following natural orders of Phanerogamæ :—Coniferæ, Gramineæ, Orchideæ, Liliaceæ, Urticaceæ, Labiataæ, Compositæ, Umbelliferæ, Rosaceæ, Leguminosæ, Cruciferæ, Ranunculaceæ.

3. *Natural History*.—(a.) The General Principles of Biology.

(b.) The distinctive characters of the Invertebrate groups.

(c.) The structure, habits, &c., of *Amæba*, *Paramæcium*, *Hydra*, *Arenicola*, *Hirudo*, *Anodon*, *Helix*, *Nephrops* or *Astacus*, and *Periplaneta*.

(d.) The distinctive characters of the Chordata groups.

(e.) A general knowledge of the orders of Sauropsida and Mammalia.

(f.) The structure, habits, &c., of *Phallusia*, *Amphioxus*, *Myxine*, *Raia*, *Clupea*, *Rana*, *Columba*, *Ornithorhynchus*, *Macropus*, *Lepus*, *Ovis*, and *Canis*.

(g.) The skeletons of *Gadus*, *Testudo*, *Equus*, *Felis catus*, *Balæna*, *Vespertilio*, and *Simia* (Orang).

(h.) The structure and life-history of *Gregarina*, *Distoma*, *Tænia*, *Ascaris*, *Trichina*, and *Filaria*.

(i.) The more important facts of the development of *Hydra*, *Amphioxus*, *Scyllium*, and *Rana*, and of the foetal appendages of *Lepus*.

(j.) The principles of the Geographical Distribution of Animals, and the Distribution of the Mammalia.

(k.) The oral examination will have special reference to the forms in italics.

4. *Physics*.—(a) Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

(b) Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with the Physical Measurement of Time.

(c) Sound and Wave-propagation in general, Intensity, Pitch and Quality of Musical Sounds, Harmonics, Concords, &c.

(d) Heat, its Nature, Effects, Measurement, Transference and Trans-

formations—Measurement of Temperature and of absolute Temperature, Thermodynamics.

(e) Light (1), Geometrical Optics, Speed of Light, Laws of Reflection and Refraction, Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes, Images, Conditions of Distinct Vision. (2) Physical Optics—Interference, Dispersion, Diffraction, Double Refraction, Polarisation, Spectrum Analysis.

(f) Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto-Electricity, Electro-Dynamics and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltameters, &c.

HONOURS AT PROFESSIONAL EXAMINATIONS.

Candidates who have displayed special merit at any of the Professional Examinations will be announced as having passed that Examination “with distinction.”

Candidates who have displayed special merit at each of the three Professional Examinations will be announced, at the time of the Graduation, as having obtained FIRST or SECOND CLASS HONOURS, according to the merit that has been displayed.

REGULATION AS TO VACCINATION.

In conformity with the desire expressed by the Local Government Board, it has been resolved that a Candidate for a Degree in Medicine must produce, at his final examination, a certificate from a Vaccine Department in an Hospital, Dispensary, or other public Institution recognised by the Local Government Board for instruction in Vaccination, to the effect that he has himself performed the operation successfully under the teacher’s inspection; that he is familiar with the different stages of the vaccine vesicle, and with the method of preserving lymph, and is thoroughly informed in every necessary part of the subject.

Recognised Vaccine Departments in Edinburgh are—in the Royal Public Dispensary, 21 West Richmond Street—*Vaccinator*, Dr Husband; in the Western Dispensary, 90 Fountainbridge—*Vaccinator*, Dr J. B. Buist.

SPONSIO ACADEMICA TO BE SIGNED BY GRADUATES IN MEDICINE.

Ego Doctoratus in Arte Medica titulo jam donandus, sancte coram Deo cordium scrutatore, spondeo, me in omni grati animi officio erga Universitatem Academicam Edinburgensem ad extremum vitæ halitum perseveraturum.

Tum porro Artem Medicam caute, caste, probeque exercitaturum, et quoad potero, omnia ad ægrotorum corporum salutem conducentia cum fide procuraturum. Quæ, denique, inter medendum visa vel audita sileri conveniat, non sine gravi causa vulgaturum.

Ita præsens spondenti adsit Numen.

FEES FOR DEGREES, &c.

Examination in Botany, Chemistry, Chemical Testing, Natural History, and Physics	£5 5 0
Examination in Anatomy, Institutes of Medicine, Materia Medica, Prescriptions, Pathology, ...	5 5 0
Final Examination in Surgery, Midwifery, Practice of Physic, Medical Jurisprudence, Clinical Medicine (with Prescrip- tions), Clinical Surgery, during last Summer Session,	10 10 0
Total Fees for M.B. and C.M. Diplomas, ...	<u>£21 0 0</u>
Additional Fee for M.D. Diploma, ...	£5 5 0
Government Stamp-Duty (for M.D. only), ...	10 0 0
Total Fees for M.D. Diploma, ...	<u>£15 5 0</u>
Matriculation Fee, ...	£1 0 0
Fee for Registration as a Member of the University General Council, if not already a Member, ...	1 0 0

In the event of the Candidate failing to pass any one of the Professional Examinations, the Fee is not returned; but he may appear at one subsequent examination without paying an extra Fee, and at any future examination on paying a Fee of £2, 12s. 6d.

Note.—Total Fees and Stamp for graduating as M.D. only, for Candidates who commenced their Medical Education before February 1861, £25.

N.B.—The above Fees include all charges for the Diplomas, and Graduates are requested to apply personally for their Diplomas at the Matriculation Office between 12 and 4 on the day of graduation. Any Graduate who cannot appear personally is required to give written authority to some person to receive and give a receipt for his Diploma.

Every Candidate for graduation is required to pay the fee of £1 for Registration as a Member of the General Council, if not already a Member.

DATES OF EXAMINATIONS, FOR PRESENTING CERTIFICATES, AND PAYING FEES FOR DEGREES,¹ &c.

The dates of the Examinations for 1892-93 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination.

Candidates are required to present their Certificates for Examinations at the Office of the Faculty of Medicine, University New Buildings, and to pay the fees at the Matriculation Office. No fees will be received until the Candidates have shown all the Certificates required to be produced for the Examinations for which they propose to appear.

Candidates, in lodging statements of their Courses of Study with the Dean of the Faculty, will observe that for all Courses and Subjects of Study the Faculty will receive Certificates only as evidence of attendance.

PRELIMINARY EXAMINATION IN GENERAL EDUCATION.

4th, 5th, 6th, and 7th October 1892; 7th, 8th, 9th, and 10th March 1893. Hours at page 365.

Names to be given in and Fees paid on or before 26th September 1892, and on or before 21st February 1893.¹

PROFESSIONAL EXAMINATIONS.

FIRST PROFESSIONAL EXAMINATION.

Practical Chemistry—23rd July 1892, and following days; and 18th March 1893, and following days, at hours to be announced.

Written Examinations—25th July 1892 and 20th March 1893—Chemistry at 10 o'clock; Botany at 1 o'clock. 26th July 1892 and 21st March 1893—Natural History at 10 o'clock; Physics at 1 o'clock.

Oral Examinations begin 26th July and 21st March 1893.

Names to be given in, Certificates shown, and Fees paid on or before 16th July 1892, and on or before 13th March 1893.¹

SECOND PROFESSIONAL EXAMINATION.

Written Examinations—18th July 1892 and 27th March 1893—Anatomy at 10 o'clock; Physiology at 1 o'clock each day. 19th July 1892 and 28th March 1893—Materia Medica at 10 o'clock; Pathology at 1 o'clock each day.

Oral Examinations begin on 19th July and 28th March.

Names to be given in, Certificates shown, and Fees paid on or before 18th July 1892, and on or before 18th March 1893.¹

¹ When names are not entered nor fees paid on or before the stated dates, a late entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his Name is entered, all the necessary Certificates, &c., lodged, and the Fee paid.

FINAL PROFESSIONAL EXAMINATION.

Clinical Examinations in Surgery begin on 2nd May, and in Medicine on 3rd May 1892.

Written Examinations—13th June 1892—Practice of Physic, 10 o'clock; Medical Jurisprudence, 1 o'clock. 14th June—Surgery, 10 o'clock; Midwifery, 1 o'clock; Prescriptions at 3.30 o'clock.

Oral Examinations begin 15th June.

Names to be given in, Certificates shown, and Fees paid for the Examination in 1892 on or before 19th April 1892, and for the Examination in 1893 on or before 18th April.¹

Theses for M.D. to be given in and Fees paid on or before 29th April 1893, and Stamp Duty to be paid on or before 15th July.¹

GRADUATION.

Monday, 1st August 1892, at 10 A.M. Candidates to assemble at 9 A.M.

Information relative to Matriculation and the Curriculum of Study, and the Subjects of Examinations for Degrees in Medicine and Surgery, and for Fellowships, Scholarships, Bursaries, Prizes, &c., &c., may be obtained on application to the Dean of the Faculty of Medicine, University New Buildings.

The fees for Matriculation, for Examinations for Degrees, and for Registration as Member of the General Council of the University, are payable at the *Matriculation Office, University (Old) Buildings*. When Candidates cannot attend personally to pay the fees, they should transmit them, by *crossed Post Office Orders*, by *Postal Orders*, or by *Bank Drafts only*, and *not* by cheques on private accounts, to the *Chief Clerk of the University Court*, who is alone authorised to receive the fees and grant receipts. When a fee is paid by a cheque on a Bank, an additional sixpence is required to be added to meet Bank exchange, unless the cheque be payable in Edinburgh or London.

EXTRA-ACADEMICAL TEACHERS.

REGULATIONS OF THE UNIVERSITY COURT RELATIVE TO CERTIFICATES OF ATTENDANCE GRANTED BY EXTRA-ACADEMICAL TEACHERS.

The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the number of Lectures, or of Meetings for Practical Instruction, in the Course; the number of occasions on which attendance was ascertained; and the

See Footnote, page 378.

number of those occasions on which the Student was present. The Certificate should also state the general scope of the Course; and, in particular, in the case of *Chemistry*, that the Course included Organic as well as Inorganic Chemistry; in the case of *Midwifery*, that it included the diseases of Women and Children; and, in the case of *Practical Materia Medica*, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

LIST OF EXTRA-ACADEMICAL TEACHERS, WHOSE
LECTURES QUALIFY FOR GRADUATION IN THIS
UNIVERSITY.

ABERYSTWYTH.

		<i>Date of Recognition.</i>
J. Ainsworth Davis, M.A.	Natural History,	28 July 1886.
H. Lloyd Snape, D.Sc.	{ Chemistry & Prac- tical Chemistry, }	19 March 1888.

BANGOR.

James J. Dobbie, D.Sc.,	{ Chemistry & Prac- tical Chemistry, }	30 May 1885.
Reginald W. Phillips, M.A.,	Botany,	30 May 1885.
Philip J. White, M.B.,	Natural History,	9 Dec. 1889.

BIRMINGHAM.

F. J. Allen, M.A.,	{ Physiology & Prac- tical Physiology, }	12 Dec. 1887.
T. W. Bridge, M.A.,	Zoology,	9 July 1883.
W. Hillhouse, M.A.,	Botany,	26 Nov. 1883.
Wm. A. Tilden, D.Sc.,	{ Chemistry & Prac- tical Chemistry, }	9 July 1883.
Bertram C. A. Windle, M.D.,	Anatomy,	{ 17 Nov. 1884 29 Oct. 1888.

BRISTOL.

G. Munro Smith, L.R.C.P.,	{ Physiology & Prac- tical Physiology, }	29 Oct. 1888.
M. R. C. S.		
<i>(Certificates for two consecutive Lecture Courses required.)</i>		

CARDIFF.

		<i>Date of Recognition.</i>
W. N. Parker	Natural History,	28 July 1886.
Claud M. Thompson, M.A., D.Sc.,	{ Chemistry & Prac- tical Chemistry, }	28 July 1886.
<i>(Lecture Course may be divided between two consecutive Sessions.)</i>		

DUBLIN.

A. C. Haddon, M.A.,	Natural History,	23 Jan. 1888.
Chs. R. C. Tichborne, Ph.D.,	Practical Chemistry,	28 Feb. 1881.

EDINBURGH.

A. P. Aitken, D.Sc.,	{ Chemistry & Prac- tical Chemistry, }	29 Oct. 1888.
J. O. Affleck, M.D.,	Practice of Physic,	8 Dec. 1879.
Byrom Bramwell, M.D.,	Practice of Physic,	18 Oct. 1880.
J. Macdonald Brown, M.B.,	{ Anatomy & Prac- tical Anatomy, }	18 July 1884.
Alexander Bruce, M.D.,	{ Pathology & Prac- tical Pathology, }	24 January 1887.
Francis M. Caird, M.B., C.M.,	{ Surgery,	13 August 1886.
Chas. W. Cathcart, M.B., C.M.,	Surgery,	17 Nov. 1884.
George Cowie,	Pract. Materia Med.	18 July 1887.
Wm. Craig, M.D.,	{ Materia Medica & Prac. Materia Med. }	14 July 1879.
T. W. Drinkwater, Ph.D.	{ Chemistry, and Practical Chemistry,	8 March 1880. 14 July 1879.
John Duncan, M.D.,	Clinical Surgery,	28 July 1886.
William Duncan,	Prac. Materia Med.,	12 April 1886.
George A. Gibson, M.D.,	Practice of Physic,	9 Dec. 1889.
F. W. N. Haultain,	Midwifery,	15 June 1891.
J. W. B. Hodsdon, M.D.,	Surgery,	3 August 1888.
Alex. James, M.D.,	Pract. of Physic,	3 August 1888.
J. Falconer King and John Hunter, jointly,	{ Chemistry & Prac- tical Chemistry, }	17 May 1890.
H. D. Littlejohn, M.D.,	Med. Jurisprudence,	before 1861.
Rev. John Lowe, F.R.C.S.E.,	Pract. Materia Med.	12 Oct. 1885.
Stevenson Macadam, Ph.D.,	{ Chemistry & Prac- tical Chemistry, }	before 1861.
W. Ivison Macadam,	{ Chemistry & Prac- tical Chemistry, }	23 July 1888.
A. N. M'Alpine, B.Sc.,	Botany,	8 March 1880.
Chas. W. MacGillivray, M.D.,	Surgery,	22 January 1883.
Augustus A. Matheson, M.D.,	Midwifery,	15 May 1889.
Alexander G. Miller, M.D.,	Clinical Surgery,	3 August 1888.
R. Milne Murray, M.B.,	Midwifery,	13 August 1886.

382 *Graduation in Medicine—Extra-Academical Teachers.*

EDINBURGH—*continued.*

		<i>Date of Recognition.</i>
J. Rymer Paterson, B.Sc.,	{ Pract. Chemistry,	3 August 1888.
	{ Chemistry,	29 Oct. 1888.
D. Noël Paton, M.D.,	{ Physiology and	24 Oct. 1887.
J. B. Readman, D.Sc.,	{ Prac. Physiology,	19 March 1888.
William Russell, M.D.,	{ Practical Chemistry,	17 Dec. 1888.
	{ Pathology & Prac-	} 6 August 1887.
	{ tical Pathology,	
Johnson Symington, M.D.,	{ Anatomy and Prac-	} 14 July 1879.
	{ tical Anatomy,	
Ralph Stockman, M.D.,	{ Materia Medica &	} 9 Dec. 1889.
	{ Prac. Materia Med.,	
J. Arthur Thomson, M.A.,	Natural History,	28 July 1886.
Roderick Urquhart,	Pract. Materia Med.,	12 Oct. 1885.
Alexander Wood,	Prac. Materia Med.,	24 January 1887.
John Wyllie, M.D.,	Practice of Physic,	20 Dec. 1878.

GLASGOW.

John Barlow, M.D.,	{ Physiology,	26 Nov. 1883.
	{ Prac. Physiology,	8 January 1890.
A. M. Buchanan, M.D.,	{ Anatomy and Prac-	} 12 Oct. 1874.
	{ tical Anatomy,	
H. E. Clark,	{ Anatomy and Prac-	} 30 January 1884.
	{ tical Anatomy,	
Joseph Coats, M.D.,	Pathology,	11 Oct. 1875.
James Dunlop, M.D.,	Surgery,	12 Oct. 1874.
Sampson Gemmell, M.D.,	Practice of Physic,	18 July 1881.
James M. Milne, Ph.D.,	{ Chemistry & Prac-	} 30 July 1884.
	{ tical Chemistry,	
Alexander Napier, M.D.,	Materia Medica,	22 April 1889.
E. E. Prince, B.A., F.L.S.,	Zoology,	15 June 1891.
Alex. Robertson, M.D.,	Practice of Physic,	15 June 1891.

LONDON.

		<i>Date of Recognition.</i>
G. B. Howes,	Natural History,	18 July 1887.
D. H. Scott, M.A., Ph.D.,	Botany,	18 July 1887.
T. E. Thorpe, Ph.D., F.R.S.,	{ Chemistry & Prac-	} 9 Dec. 1889.
	{ tical Chemistry.	

NOTTINGHAM.

Frank Clowes, D.Sc.,	{ Chemistry & Prac-	} 9 Dec. 1889.
	{ tical Chemistry.	

OXFORD.

Alfred Willson, Ph.D.,	Pract. Materia Med.,	29 Oct. 1888.
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SHEFFIELD.

W. Carlton Williams, B.Sc., { Chemistry & Prac- } 26 Nov. 1883.
 { tical Chemistry, }

RIGHTS OF THE GRADUATES IN MEDICINE AND
SURGERY OF SCOTLAND ACCORDING TO THE
MEDICAL ACT.

Before the passing of the Medical Act of 1858, the Degree of Doctor of Medicine granted by the Universities of Scotland (as the possessor underwent a complete education and examination in all departments of Medicine, Surgery, and Midwifery), qualified the Graduate to practise every branch of the Medical profession throughout Scotland. One principal purpose of the Medical Act was to extend local rights of practice over the whole of Her Majesty's dominions. But according to the hitherto accepted reading of a dubious clause in the Act, no one can practise both Medicine and Surgery without possessing two distinct Diplomas—one for Medicine and another for Surgery. The Universities were thus compelled, in justice to their Graduates, to give them the additional title of Master in Surgery, not as implying any additional study or examination, but as declaring more distinctly their qualifications, and to permit Registration as regularly qualified practitioners in the whole field of their professional education. The Secretary for War some time ago issued an Order that candidates for admission into the Medical service of the Army should obtain their qualifications in Physic and Surgery from two different sources; the effect of which would have been to prevent any one University from qualifying for this purpose. The Scottish Universities' Commissioners, recognising the serious evils of such a system, followed up a remonstrance which had been offered on the part of the University of Edinburgh, and obtained the rescinding of all restrictions in the source of qualification. Consequently, any single University in Scotland can now qualify candidates for the Military and Naval Services as well as for any other public Medical service in the country.

THOMAS R. FRASER, M.D.,
Dean of the Faculty of Medicine and
Professor of Materia Medica.

DOCTORS OF MEDICINE

WHO HAVE BEEN AWARDED GOLD MEDALS FOR THEIR THESES
FROM 1887 TO 1891, BOTH YEARS INCLUDED.¹

1887.

George A. Atkinson, England
Alexander Bruce, Scotland
John Gibson, Orkney
William C. S. Miller, Scotland
Robert Wm. Philip, Scotland
John Stevens, Scotland

1888.

James Graham, Scotland
John Berry Haycraft, England
George Mackay, Madras

1889.

Herbert H. Ashdown, England
John W. Ballantyne, Scotland
Arthur J. M'D. Bentley, England
Kenneth M. Douglas, Scotland
Thomas A. Helme, England
Henry Alexis Thomson, Scotland

Joseph Tillie, Scotland
Herbert F. Waterhouse, England

1890.

Joseph Griffiths, Wales
Robert Muir, Scotland
George Edmund Pieriez, Ceylon
W. G. A. Robertson, Scotland
Arthur Robinson, England
John David Williams, Wales

1891.

Edmund W. W. Carlier, England
Vaughan Berkeley Harley, England
David Hepburn, Scotland
Alexander Miles, Scotland
James Ritchie, Scotland
George Neil Stewart, Scotland
John Clarence Webster, Canada

DOCTORS OF MEDICINE, WITH THE TITLES OF THEIR THESES, WHO
GRADUATED ON 1ST AUGUST 1891.

*** *Obtained Gold Medals for their Dissertations.*

** *Deemed worthy of competing for Gold Medals.*

* *Commended for their Dissertations.*

1* John William Anderson,
Scotland (M.A.), M.B.,
C.M. (with Second-Class
Honours), 1880. A Suc-
cessful Method of Arresting
the Progress of Typhoid
Fever, especially in its
initial stages, with remarks
on the Causation and early
Diagnosis of this Fever.

* Richard Arthur, Scotland

(M.A.), M.B., C.M., 1888.
Hypnotism and its Thera-
peutic Uses.

** Thomas Borthwick, Scotland,
M.B., C.M., 1881. A Con-
tribution to the Demography
(including some Remarks on
the Climate, Hygienic, and
other Conditions) of South
Australia.

Francis Oke Buckland, Eng-

¹ The names of those who received Gold Medals prior to 1859 will be found in the List of Graduates in Medicine of the University of Edinburgh since its foundation, published in 1867, and the names of those who received Gold Medals from 1859 to 1889, both years included, will be found in the Historical Appendix to List of Graduates, published in 1889, pp. 128, 129.

- land (B.A.), M.B., C.M., 1887. Rapid Heart.
- *** Edmund William Wace Carlier, England (B.Sc.), M.B., C.M. (with Second-Class Honours), 1886. A Contribution to our Knowledge of Hibernation, and a Description of the Minute Anatomy of some of the more important Organs in the Hedgehog, with the Changes that occur in them during Winter Sleep.
- Harry George Critchley, England, M.B., C.M., 1889. Ametropia and its Correction.
- ** Thomas Watts Eden, England, M.B., C.M. (with First-Class Honours), 1888. A Contribution to the Pharmacology of White Hellebore.
- Robert Fullerton, Scotland, M.B., C.M., 1886. Observations upon Certain Causes of Chronic Rhinitis.
- * Walter Chancellor Garman, England, M.B., C.M., 1883. Whooping Cough: its Nature and Treatment.
- 10* Alexander Grant, Scotland (M.A.), M.B., C.M., 1881. Clinical Notes on Chronic Endometritis.
- William Thomas Grant, Scotland, M.B., C.M., 1876. Notes on the Therapeutics and Treatment of Puerperal Women.
- Andrew Gray, Scotland (M.A.), M.B., C.M., 1888. On the Treatment of Pleural Effusions, with cases.
- *** Vaughan Berkeley Harley, England, M.B., C.M., 1887. Pancreatic Diabetes: a Clinical and Experimental Inquiry into its Nature, Causation, and Treatment.
- * Arthur Conning Hartley, England, M.B., C.M., 1888. Treatment of Neuralgia, with special reference to Methylacetanilide.
- * Lewis Arthur Hawkes, New Zealand, M.B., C.M., 1886. Tuberculin in Phthisis; Clinical Notes.
- *** David Hepburn, Scotland, M.B., C.M. (with Second-Class Honours), 1881. The Anatomy and Comparative Anatomy of the Muscles and Nerves of the Superior and Inferior Extremities of the Anthropoid Apes.
- Thomas Daniel Hill Holmes, England, M.B., C.M., 1887. The Value of Antipyrin in Epilepsy and Epileptiform Convulsions.
- * James Hunter, Scotland (M.A.), M.B., C.M., 1885. Rhino-scleroma.
- ** Richard Jones, Wales, M.B., C.M., 1880. Epidemic Pneumonia: its Classification, Special Clinical Features, Etiology, and Treatment.
- 20 Thomas Luson, England, M.B., C.M., 1887. The Treatment of Neuralgia.
- ** Thomas Mackenzie, Scotland (M.A.), M.B., C.M., 1886. Gall Stones; more especially their Characters, Causes, Consequences, and Treatment.
- * Ewen John Maclean, Wales, M.B., C.M. (with Second-Class Honours), 1889. The

- Knee-Jerk : its Clinical Significance and Quantitative Estimation.
- *** Alexander Miles, Scotland, M.B., C.M., 1888. On Head Injuries : an Experimental, Clinical, and Pathological Study.
- Byres Moir, England, M.B., C.M., 1876. Acute Ulcerative Endocarditis.
- John Nivison, Scotland, M.B., C.M., 1870. On Twins, or Plural Births.
- Charles Paton Parry, Wales, M.B., C.M., 1889. Heart Disease in Insanity.
- Emyr Owen Price, Wales, M.B., C.M., 1879. An Account of a Typhoid Epidemic.
- George Stringer Pullon, England, M.B., C.M., 1880. Poliomyelitis Anterior Acuta, with the History of a Case in an Adult, and Special Reference to the Symptoms and Pathology.
- * Alwyn Raimes, England, M.B., C.M., 1885. Observations on Pemphigus.
- 30*** James Ritchie, Scotland, M.B., C.M. (with Second-Class Honours), 1872. Cystic Diseases of the Kidney.
- Charles Robertson, India, M.B., C.M., 1888. Treatment of Tubercular Disease by Tuberculin.
- Walter Scott, England, M.B., C.M., 1887. A Pharmacological Classification of some of the most common Diuretics.
- * William Duncan Scott, Scotland (M.A.), M.B., C.M., 1883. Notes on Beri-beri.
- *** George Neil Stewart, Scotland (M.A., D.Sc.), M.B., C.M., 1889. The Influence of Temperature and of Endocardiac Pressure on the Action of the Vagus and Sympathetic Nerves on the Batrachian Heart.
- ** John Thomson, Scotland, M.B., C.M., 1881. On so-called Congenital Obliteration of the Bile-ducts.
- Ninian George Trotter, New Zealand, M.B., C.M. (with Second-Class Honours), 1888. Broncho-Pneumonia in Young Children.
- * John Patrick Tulloch, Scotland (M.A.), M.B., C.M., 1881. Yaws in Tobago, West Indies, with Special Reference to a Series of 850 Consecutive Cases.
- Edward Brooking Cornish Walker, England, M.B., C.M., 1881. Sex in its Relation to Insanity.
- * Quinton MacAdam Wallace, Scotland (M.A.), M.B., C.M. (with First-Class Honours), 1887. The Birkenhead Typhus Epidemic of 1890-91.
- 40*** John Clarence Webster, Canada (B.A.), M.B., C.M. (with Second-Class Honours), 1888. Tubo-Peritoneal Ectopic Gestation. The Anatomy of the Pelvis during the Puerperium, and the Female Pelvic Floor.
- * Thomas Whitelaw, Scotland, M.B., C.M., 1887. Blood-red Milk in Women.
- Alfred Henry Williams, New Zealand, M.B., C.M., 1887. Toxic Amaurosis.

14TH APRIL, 1892.

John Arden Ashcroft, M.B., C.M., 1885. On Graves' Disease.	Charles Henry Bedford, England, M.B., C.M., 1887. Ty- phoid Fever in India.
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GRADUATES (M.B., C.M.) WHO HAVE PASSED THE EXAMINATIONS
WITH HONOURS FROM 1887 TO 1891, BOTH YEARS INCLUDED.¹

1887.

Class I.

André A. Bruère, West Indies
Ernest Christison Carter, England
Thomas Eustace Hill, England
G. O. C. Mackness (B.A.), Eng.
Ralph Henry Maddox, England
Christopher Martin, England
William Aldren Turner, Scotland
Q. M. Wallace (M.A.), Scotland
Thos. Hamilton Ward, England

Class II.

James Cameron, Scotland
George Fred. Odhams, England
Ross Francis Robertson, Scotland
Andrew Rowand, Scotland
William Carr Sprague, England
James Richard Whitwell, England
William Fraser Wright, Scotland

1888.

Class I.

Louis Edw. Barnett, N. Zealand
Thomas Watts Eden, England
Robt. Alex. Fleming (M.A.), Scot.
William Fordyce (M.A.), Scotland
John Montgomery, Scotland
Robert Muir (M.A.), Scotland

Class II.

William Andrew Betts, England
Robert Edie, Scotland
Sydney Jamieson (B.A.), Australia

Stephen Moister Laurence, West
Indies

William George Laws, England
Frederick John M'Cann, Scotland
Jas. Middlemass (M.A., B.Sc.),
Scotland

James Ritchie (M.A.), Scotland
James Smuts, Cape Colony
John Somerville, New Zealand
Isaac Thompson, England
John Christopher Thomson (M.A.),
Scotland

James Henry Traquair, Scotland
Ninian George Trotter, N. Zealand
Dawson Fyers Duckworth Turner
(B.A.), England
John Clarence Webster (B.A.),
Canada

John David Williams, Wales

1889.

Class I.

Robert Oswald Adamson (M.A.),
Scotland

John William Crerar, Scotland
William Fred. Farquharson, Scot.
James Lackie, Scotland
Jas. Hill Williamson Laing (M.A.,
B.Sc.), Scotland

Hamilton Graham Langwill, Scot.
Alexander Maclean, Scotland
Eustace G. Pilgrim, Barbados
Wm. Gordon Woodrow Sanders,
Scotland

¹ For names of those who received the Degrees with Honours prior to 1889, see
Historical Appendix to List of Graduates of the University, published in 1889,
pp. 129-132.

James Andrew Thyne, Scotland
George Wilkinson, England

Class II.

Robert Dunlop Reid Allison, Scot.
William Everett, England
George Alfred Walter, England
Colin Gordon, England
Ewan John Maclean, Wales
James Monteith, Scotland
Benjamin Sweeten, Scotland
C. N. C. Wimberley, Scotland

1890.

Class I.

Charles James Whitehead Dixon,
England
Carstairs Cumming Douglas, Scot-
land
Gerald Fitzgerald, Scotland
Robert Main Horne, Scotland
Colin Forbes Lees, Scotland
William Paterson, Scotland
George William Thompson, La
Plata
William Kerr Walker, Scotland

Class II.

Edward Henry Alexander, New
Zealand

Robert Brown, Scotland
John Wheeler Dowden, Ireland
George Balfour Marshall, Scotland
Arnold Winkleried Williams,
England

1891.

Class I.

John Wardle Bone, England
Wm. Blackley Drummond, Scot.
George Elder, Scotland
Edward Barnard Fuller, Africa
Henry Baker Hall, England
George Hennan, Scotland
Herbert Saunders Wansbrough
Jones (B.Sc.), Wales
Harry Rainy (M.A.), Scotland

Class II.

Robert Johnston Ashton (B.A.),
England
Robert Cran, Scotland
Frederich Wilhelm Eurich, Saxony
David J. Mackenzie (M.A.), Scot.
John Orr, Scotland
David Stuart, Scotland
Wm. J. Walker (B.A.), Australia
Neish Park Watt (M.A.), Scotland
John Thos. Wilson, Tasmania

BACHELORS OF MEDICINE AND MASTERS IN SURGERY, WHO
GRADUATED ON 1ST AUGUST 1891.

Small CAPITALS indicate First-Class Honours.

Italics Second-Class Honours.

Walter Adam, Scotland
Alexander James Anderson,
Scotland
Alford William Anderson,
Scotland
James Anderson (M.A.), Scot.
5 John Anderson, Scotland
Robert Johnston Ashton (B.A.),
England
Frederick Richard Breeks
Atkinson, England

James Atkinson, Ireland
Louis Gabriel Barbeau, Mau-
ritius
10 Joseph Herbert Bayley, Eng.
Hugh Bennett, India
Richard James Arthur Berry,
England
Alfred John Bienemann, Eng.
Thomas Hill Bishop, England
15 Hight Blundell, England
JOHN WARDLE BONE, Eng.

- | | |
|---|--|
| <p>George Edward Bowker, Eng.
John Joseph Brennan, Australia
Thomas Booth Brierley, Eng.
20 James Douglas Broadfoot,
Scotland
Samuel Carter Brush, Scotland
William Murray Cairns, Eng.
Kenneth Mackenzie Cameron,
Scotland
Percy Capper, England
25 Edward John Walter Car-
ruthers, Scotland
Charles William Chapman,
England
Hugh Aiken Clark, India
George Ernest Clemons, Tas-
mania
Charles Cochrane, England
30 Robert Pitcairn Cockburn,
Scotland
Christiaan Jacobus van Coller,
South Africa
John William Compton, Eng.
John Cowan, Scotland
<i>Robert Cran</i>, Scotland
35 John Hamilton Crawford,
Australia
John Frank Crombie, Scot.
Herbert William Crosse, Eng.
George Denholm Darlington,
Scotland
James Davidson (M.A.), Scot.
40 Harold Roberts Lloyd Davies,
England
Robert Greenwood Dempster,
England
WILLIAM BLACKLEY DRUM-
MOND, Scotland
Alfred Duke (M.A.), Scot.
Samuel Edgerley (M.A.),
Scotland
45 GEORGE ELDER, Scotland
Arthur Campbell Elliott,
Mauritius
Michael Emin, India
<i>Friederich Wilhelm Eurich</i>,
Saxony</p> | <p>James Lumsden Fenton (B.A.),
Australia
50 Lawrence George Fink, India
Ernest Cotton Fischer, Scot.
James Lyon Fletcher, England
William Douglas Forsyth,
Scotland
Francis Troughton Foster,
New Zealand
55 Edward Joseph Fox, England
John Francis, England
Hugh Ernest Fraser (M.A.),
Scotland
EDWARD BARNARD FULLER,
Africa
William Monro Dasent Gallie,
West Indies
60 Denson Gibb, England
Henry Joseph Glover, Scot.
Frederick Gourlay, Scotland
Francis Charles Henry Grenier,
Ceylon
William Griffith, Wales
65 William Clayton Grosvenor
(M.A.), England
HENRY BAKER HALL, Eng.
Stanley Arthur Harriss, India
Stephen Herbert Hartley, Eng-
land
Alfred Joseph Haslam, Eng.
70 Piers James Hatton, England
Edmund Hay, Poland
William Peach Hay, Scotland
Richard Armstrong Heath,
America
George Edgar Helme, Eng.
75 Thomas Rowatt Henderson
(M.A.), Scotland
GEORGE HENNAN, Scotland
Sidney Hillier, England
George John Brown Hope
(M.A.), Scotland
John Vernon Hulme, England
80 Robert Beveridge Huxtable,
Tasmania
Pulipada Richard Hay Jagan-
nadhram (B.A.), India</p> |
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| <p>HERBERT SAUNDERS WANS-
BROUGH JONES (B.Sc.),
Wales
John Lewis Jones, Wales
Arthur Backwell Kenworthy,
England
85 Edward Kinmont, Scotland
Robert Lamb (M.A., B.D.),
New Zealand
Leslie James Lamrock, Aus-
tralia
Ernest Philip Theodor von
Landsberg, Cape Colony
Herbert Ernest Lee (B.A.),
Australia
90 Cyril Lewis, Wales
John Livingstone, Scotland
Alexander John M'Callum,
Scotland
Thomas Finlayson Macdonald,
Scotland
Henry Moncreiff MacGill,
Scotland
95 Wakefield MacGill, Scotland
Thomas Newall Macgowan,
England
James Twiname M'Kay, Scot.
Thomas George M'Kellar,
New Zealand
<i>David John Mackenzie</i> (M.A.),
Scotland
100 Frederick John M'Kettrick,
Scotland
Archibald Mackintosh, Scot.
John Maclaren, Scotland
Samuel Maclean, Scotland
William Bernera Macleod,
Scotland
105 Charles Macmaster, Scotland
David Macmillan (M.A.),
Scotland
John Lewis Macrae, Scotland
Frederic Rowland Mallett,
England
Charles Martin, England
110 Thomas Graham Mathews,
England</p> | <p>John Seymour Maynard, Eng.
George Melville, Scotland
William Mill (B.A.), New
Zealand
James Miller, Scotland
115 Thomas Hugh Milroy, Scot.
William Cunningham Milroy
(M.A.), Scotland
George Henderson Mitchell,
Scotland
Ernest Coleman Moore, Eng.
Lancelot Paxton More, Eng.
120 Paxton St Clair More, Eng.
Frederick William Moss, India
John Douglas Ross Munro,
England
James Augustus Murison, India
William Murray, Scotland
125 Alexander Jacob van Niekerk
(B.A.), South Africa
Samuel Ingleby Oddie, Eng.
Walter Holland Ogilvie, Scot.
<i>John Orr</i>, Scotland
Thomas Llewelyn Parry,
Wales
130 William Peart-Thomas, Eng.
Geoffrey Hammett Prance,
England
Richard Llewelyn Price,
Wales
HARRY RAINY (M.A.), Scot.
James Murray Renton (M.A.),
Scotland
135 Edward Hope Ridley, Eng.
Joseph Harry Roberts, Eng.
Alaric George Robertson,
Scotland
John Fordyce Robertson,
(M.A.), Scotland
William Ford Robertson,
Scotland
140 Faustin Albert Rodriguez,
Trinidad
James Corrigan Rossie, Scot.
Alexander Rutherford, Scot.
Alfred Rutter, England
John Barron Scott, Scotland</p> |
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| <p>145 Robert William Loveridge
Scott, Australia
Samuel Allan Shiach, Scot.
Edward Wheeler Slayter,
Canada
James Burnet Smith, Scot.
John Grimmond Smith, Scot.</p> <p>150 John Spurway, England
Edward Millar Steven, Scot.
Thomas Stodart, Scotland
Archibald Stodart-Walker,
England
Charles Stuart, Scotland</p> <p>155 <i>David Stuart</i>, Scotland
Charles Arthur Sturrock
(M.A.), Scotland
Charles David Sutherland,
Scotland
John Sutherland, Scotland
William Smith Syme, New-
foundland</p> <p>160 Bernard Thomas, Wales
William Thyne (M.A.), Eng.
David Duncan Tindal, Scot.
Henry Stanley Walker, Eng.
Thomas Dyson Walker (B.A.),
Canada</p> <p>165 <i>William John Walker</i> (B.A.),
Australia
David Henry Walsh, Eng.</p> | <p>Gerald Stockwell Walton,
Eng.
George Glendinning Watson,
Scotland
<i>Neish Park Watt</i> (M.A.),
Scotland</p> <p>170 Alfred Irby Webster, Eng.
James Harris Garcia White-
ford (B.A.), Scotland
David Wield (M.A.), Scot.
Rowland Stanley Wilde, Eng.
John Cadwaladr Williams,
Wales</p> <p>175 John David Williams, Wales
John William Williams, New
Zealand
George Wilson (M.A.), Scot.
<i>John Thomas Wilson</i>, Tas-
mania
Thomas Alexander Miller
Wilson, Scotland</p> <p>180 John Maxwell Wood, Scot.
David Hastings Young,
Australia
James Young Simpson Young,
Scotland
Richard John Erskine Young,
Scotland
Frederick Selim Zaytoun,
Syria</p> |
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14TH OCTOBER 1891.

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| <p>Francis Thomas Auden, Eng.
Francis Robert Knox Ball,
England
Thomas Wilson Banks, Scot.
Edward Ashe Braithwaite,
England</p> <p>5 Samuel Bellenden James
Bulteel, England
Peter Gerhard van der Byl,
Cape Colony
Daniel Campbell, Scotland
George Clark Cathcart (M.A.),
Scotland
John Adamson Honey Dun-
can, Scotland</p> | <p>10 Hanson Cotton Evison, Eng-
land
Ralph Sanderson Ferguson
(B.A.), England
Samuel Bradley Figgis, Eng.
Frank Debenham Fisher,
England
George Fleming, Scotland</p> <p>15 James Walls Forbes, Scot.
Frederick Walter Foxcroft,
England
Douglas Clark Gardiner,
Australia
Henry Charles Garth, Eng.
Walter Edwin Godber, India</p> |
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| <p>20 Casimiro Joaquim Gomes,
Demerara
George Taylor Guild, Scot.
Edward Betton Gwynn, Eng.
Harry Percival Hannay, Eng-
land
Walter Benjamin Harry, Wales</p> <p>25 Mirza Karim Khan, India
Henry Breckenridge Knox,
Port au Prince
Walter Littlewood Legg, Eng-
land
Alexander Anderson M'Leod,
Scotland
Duncan M'Neill, Scotland</p> <p>30 Alexander Kennedy Melville,
Scotland
Cecil Augustus Morgan, Wales
Hugh Brooming Taylor Mor-
gan, Wales</p> | <p>Duncan Shaw Morrison
(M.A.), Scotland
Edgar Rowe Parry, India</p> <p>35 Stuart Patrick Peart, India
James Lewis Reed, Australia
Stanley Riseley, England
Albert Frederic Rosa, Scot.
John Sharp, Scotland</p> <p>40 William James Johnstone
Stewart, Scotland
Frank Albert Symons, Canada
Frank Martin Thomas, Wales
Albert George Thomson, Eng.
John Martin Thomson, Scot.</p> <p>45 John Tod Thyne, Scotland
Hubert Tibbets, England
Frederick Randolph Turton,
England
James Curtis Whyte, Scotland
Eugene Stephen Yonge, Eng.</p> |
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14TH APRIL 1892.

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| <p>Charles Frier, England
Frederick William Mackay,
England
Alexander John Mackintosh,
Scotland</p> | <p>Frederick Linney Pochin,
England</p> <p>5 Alexander Orford Schorn,
India
George Richard Wilson, Eng.</p> |
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Class Prize Lists.

WINTER SESSION, 1891-92.

I.—CHEMISTRY.

ROBERT WILSON MEMORIAL PRIZE.—John W. Paterson, Skirling.

FIRST-CLASS HONOURS.—1. Andrew Lee, Earlston, and James M. Watson, Campbeltown—equal; 3. John M. Jeffrey, Broxburn, and Frederick R. Jones—equal; 5. H. W. Bolam, Leith, and James W. Horne—equal; 7. John W. Paterson, Skirling (*Medal-lists*); 8. William Thomson; 9. A. Ritchie Scott; 10. William F. Harvey and J. A. Milroy—equal; 12. Alex. P. Low; 13. G. P. Henderson and James Stenhouse—equal; 15. Robert Somerville; 16. Frederick Beddow and Rhodes Haygarth, Keighley—equal; 18. Harry Fowler and Bertram Prentice—equal; 20. Scott Car-

michael; Frederick Gardiner, Edinburgh; and H. G. Walker—equal; 23. Stuart Macdonald, Castle-Douglas, and W. L. Martin—equal; 25. G. Laurie Anderson, Brooklyn, N.Y., and Frank V. Sullivan—equal; 27. T. H. Macfie, Edward J. Taylor, and J. Aquilon Forrest—equal.

SECOND-CLASS HONOURS.—30. W. J. Buchanan; W. Fulton, M.A., Galashiels; P. C. Lüttig, Cape Colony; and David R. Rowlands—equal; 34. W. H. Forster and Robert M. Leith, Cape Colony—equal; 36. Wilfred E. Gibbons and G. F. Petrie—equal; 38. H. S. Ballantyne and Alex. Cossar Sturrock—equal; 40. H. S. Brockway and David D. Gold—equal; 42. J. Wicks Christie, Edinburgh; Francois Robert Momple; J. Kimber Raymond, Natal; and William Hunter Robb, Caerlaverock—equal; 46. Albert W. Easmon, West Africa; William Lillie, Edinburgh; W. R. Mander; F. M. Simmonds, Trinidad; and John W. Simpson—equal; 51. H. Cardale, T. Sid. Church, Rochester; James Davidson, and C. J. Gorringer—equal; 55. John Ballantyne, Kirkcudbrightshire; Daniel Brough, J. T. Hewetson, Carlisle; and Andrew Wallace—equal; 59. Walter F. Easson, Lewis Grant, Strathpey; R. M. Hall, South Shields; A. Lewis Husband, Mansfield; G. F. Lundie, Cape Colony; Robert Mudie, Dundee; and David Roger, Johnshaven—equal; 66. Arthur T. Sampson, Bedford; and F. S. Stanwell—equal; 68. James Mitchell Edinburgh; 69. James Allison; 70. James Bannerman, Southport; Arthur Dickson, John Eason, John Gordon, Kirkcaldy; B. L. L. Learmonth, Polmont; John Macmillan, A. Melvin, and W. J. Penfold—equal; 78. Alex. W. Buchanan, James Fisher Lindsay, Lanarkshire; F. Bedingfeld Macdonald, Keith; Alex. Steven, F. Thompson, and Arthur E. White—equal; 84. W. J. C. Coulthard, William Hugh Hill, Kelso; A. J. Park, and William A. Skinner, Lauder—equal; 88. John Crawford, Edinburgh; William B. Duffus, J. D. Gilruth, Auchmithie; and G. F. Waterston—equal; 92. A. G. G. Cumming, Fochabers; Hugh Dewar, Harold Nuttall, Liverpool; J. W. de Vos, Cape Colony; and William W. Wood, Leith—equal; 97. J. Herbert Dixon, Nottingham, and George H. Masson, Trinidad—equal; 99. Alan Y. Greenwood, Duncan M. Mackay, Hull; H. F. L. Taylor, and Edward Ferris Wills, London—equal; 103. Wm. J. A. Erskine, Edinburgh; William A. Gemmell, British Guiana; James Sackville Martin, Portlaw; Noel Maudsley, Arthur D. Peill, and T. H. Stevenson—equal; 109. S. H. Carr, Carlisle; Walter Johnson, and W. H. Steele—equal; 112. Campbell Botha, Cape Colony; H. M. Morton, Cumberland; W. G. Rennie, J. C. Stuart, Darlington; and Alfred E. Williams, Chester—equal.

PRACTICAL CHEMISTRY.

SUMMER SESSION, 1891.

FIRST-CLASS HONOURS.—1. James M. Beattie (*Medallist*) ; 2. James R. Watson ; 3. H. V. Münster ; 4. Alexander Miles.

SECOND-CLASS HONOURS.—5. B. H. Chaudhuri ; 6. A. J. Campbell ; 7. J. T. Titterton ; 8. E. D. W. Greig ; 9. L. S. L. Liddell ; 10. J. S. H. Chancellor.

WINTER SESSION, 1891-92.

FIRST-CLASS HONOURS.—1. George H. Masson, Trinidad ; 2. Rhodes Haygarth, Keighley ; 3. Bertram Prentice ; 4. G. P. Henderson, Robert M. Leith, Cape Colony ; and Jas. Stenhouse—equal (*Medallists*) ; 7. B. L. L. Learmonth, Polmont, and F. S. Stanwell—equal ; 9. H. S. Ballantyne, John M. Jeffrey, Broxburn ; Fredk. R. Jones, T. H. Macfie, and Edward John Taylor—equal ; 14. J. Aquilon Forrest and Arthur D. Peill—equal ; 16. Fred. Gardiner, Edinburgh ; W. F. Harvey, and P. C. Lüttig, Cape Colony—equal ; 19. A. Lewis Husband, Mansfield ; Andrew Lee, Earlston ; and David Roger, Johnshaven—equal ; 22. William Thomson ; 23. J. Brunton Blaikie, Daniel Brough, Albert W. Easmon, West Africa ; Alex. J. Park, and G. F. Petrie—equal ; 28. George John Jenkins and John Macmillan—equal ; 30. Harry Fowler, James Fisher Lindsay, Duncan M. Mackay, Hull ; J. A. Milroy, and Andrew Wallace—equal ; 35. W. H. Forster, W. J. Penfold, and William Hunter Robb, Caerlaverock—equal ; 38. Ernest J. Bray, Samuel Couling, North China ; J. Herbert Dixon, Nottingham ; J. W. Edwards, and David R. Rowlands—equal ; 43. W. J. C. Coulthard, John W. Simpson, and J. C. Stuart, Darlington—equal ; 46. James Allison, W. J. Buchanan, William A. Gemmell, British Guiana ; Alex. P. Low, A. D. Macpherson, M.A., Kingussie ; Percy W. Shepherd, H. F. L. Taylor, and Alfred E. Williams, Chester—equal.

SECOND-CLASS HONOURS.—54. James Davidson, David D. Gold, and Gilbert A. Welsh—equal ; 57. John Ballantyne, Kirkcudbrightshire, and John Eason—equal ; 59. S. H. Carr, Carlisle ; R. M. Hall, J. T. Hewetson, Carlisle ; and Frank V. Sullivan—equal ; 63. F. J. Campbell Botha, Cape Colony ; and James Mitchell, Edinburgh—equal ; 65. Scott Carmichael, Stuart Macdonald, Castle-Douglas ; Arthur T. Sampson, Bedford ; and F. M. Simmonds, Trinidad—equal ; 69. Walter F. Eason ; 70. T. S. Church, Rochester ; William Fulton, M.A., Galashiels ; C. J. Gorringe, Walter Johnson, and James Sackville Martin, Portlaw equal ; 75. Hugh Dewar, Arthur Dickson, F. A. Hardy, and J. Kirk—equal ; 79. William Lillie, Edinburgh ; 80. Alex. W. Buchanan ; 81. James Bannerman, Southport ; J. H. Sholto Douglas, G. F. Lundie, Cape Colony ; F. Bedingfeld Macdonald, Keith ; and

Robert Mudie, Dundee—equal ; 86. J. D. Gilruth, Auchmithie ; Charles MacLaurin, John Peterson, John Turner, and William W. Wood, Leith—equal ; 91. J. W. de Vos ; 92. F. T. H. Adamson and E. R. Snijman—equal ; 94. J. W. Christie, Edinburgh ; William Hugh Hill, Kelso ; and J. K. Raymond, Natal—equal ; 97. John M. Coates, Lewis Grant, Strathspey ; and F. Thompson—equal ; 100. Angus Macdonald, Edinburgh ; Harold Nuttall, Liverpool ; Ibrahim Abd-El-Saied, and Edward F. Wills, London—equal ; 104. Robert Thornton ; 105. J. F. Holden, W. R. Mander, James Leslie Marjoribanks, and John B. Wilson—equal ; 109. W. E. Gibbons, Angus M'Leod, Robert G. Ralston, W. H. Steele, and Chas. Williams—equal ; 114. J. Crawford, Edinburgh, and J. Hirst—equal ; 116. Robert M. Gibson, David M'Askie, and G. F. Waterston—equal. J. M. Watson was absent through illness from one examination, and obtained 85 per cent. over the other three.

ALEX. CRUM BROWN, M.D., *Professor*.

II.—BOTANY.

SUMMER SESSION, 1891.

SENIOR DIVISION.

FIRST-CLASS HONOURS.—1. John S. Flett, Kirkwall (*Medallist*) ; 2. James P. Hill, Kennoway.

SECOND-CLASS HONOURS.—3. A. C. Pentland Smith, Fife ; 4. Alexander M'Callum, Scotland ; 5. Edwin Bramwell, England.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. Andrew Lee, Earlston ; 2. James M. Beattie, New Zealand, and Maurice Dee, Ireland—equal ; 4. Neil Macvicar, Peeblesshire ; 5. James H. Frazer, M.A., Edinburgh (*Medallists*) ; 6. Henry Reynolds Brown, Argyllshire ; 7. Colin M'Vicar, Scotland ; 8. Henry S. Brockway, Madagascar, and W. de W. Wishart, British Guiana—equal ; 10. Daniel Brough, Musselburgh.

SECOND-CLASS HONOURS.—11. William F. Harvey, India ; 12. Wilfred E. Gibbons, Liverpool ; and Harold V. Münster, Belfast—equal ; 14. William Mitchell, Scotland ; 15. E. T. F. Birrell, Penicuik ; Walter E. Johnstone, Cromarty ; and D. Russell, Scotland—equal ; 18. Harry Fowler, Edinburgh ; Lewis Grant, Abernethy ; and J. A. Milroy, Wigtownshire—equal ; 21. W. W. Chipman, Canada ; 22. C. F. Lassalle, Trinidad ; Duncan M. Mackay, Hull ; Arthur Davies Peill, Madagascar ; and T. H. Taylor, Cambridgeshire—equal ; 26. J. F. Hewetson, Hornsby Gate ; Bertram Prentice, Scotland ; and E. G. Richards, Brechin—equal ; 29. Charles W. Anderson, Perthshire ; 30. Alfred T.

Evans, Llandyssul; Alexander P. Low, Arbroath; and Lewis A. Williams, Chester—equal; 33. John Eason, Armadale; W. J. Adams Erskine, Edinburgh; and James Kirk, Scotland—equal; 36. James Allison, Carlisle; 37. S. H. B. Allison, Londonderry; Thomas C. Baillie, West Linton; Horace C. Colman, Peterborough; and Rhodes Haygarth, Keighley—equal; 41. Noel Maudsley, Appleby; James A. Murray, Cramond; Harry E. Smith, Peterhead; and James M. Watson, Campbeltown—equal; 45. A. F. Watson, Edinburgh; 46. George Shaw, Edinburgh; 47. E. E. Brierley, Rochdale; and Alexr. Jos. M'Iroy, New Zealand—equal.

WINTER SESSION, 1891-92.

SENIOR DIVISION.

SECOND-CLASS HONOURS.—Henry Bateson, Bolton.

JUNIOR DIVISION.

SECOND-CLASS HONOURS.—1. G. Laurie Anderson, Brooklyn, N.Y., and Noel Dean Bardswell, Kingston-on-Thames—equal; 3. D. T. R. Jones, Rhymney; 4. Samuel Couling, N. China, and Wm. D. Elder, Lanarkshire—equal.

PRACTICAL BOTANY.

SUMMER SESSION, 1891.

EIGHT O'CLOCK SECTION.

FIRST-CLASS HONOURS.—1. James M. Beattie, New Zealand, and Neil Macvicar, Peeblesshire—equal (*Medallists*); 3. J. Herbert Dixon, Nottingham, and D. Russell, Scotland—equal.

SECOND-CLASS HONOURS.—5. James D. Millar, Edinburgh; James Mitchell, Edinburgh; and Philip M. Ragg, Shropshire—equal; 8. Henry S. Brockway, Madagascar, and Harry J. Ewald, West Indies—equal.

TEN O'CLOCK SECTION.

FIRST-CLASS HONOURS.—1. Andrew Lee, Earlston; 2. William Mitchell, Scotland (*Medallists*); 3. James H. Frazer, M.A., Edinburgh, and B. L. Seawell, U.S. America—equal; 5. E. T. F. Birrell, Fenicuil; Wilfred E. Gibbons, Liverpool; and Rhodes Haygarth, Keighley—equal.

SECOND-CLASS HONOURS.—8. Thomas M. Bartlett, Jamaica; William F. Harvey, India; and J. Kimber Raymond, Natal—equal; 11. Maurice Dee, Ireland, and E. G. Richards, Brechin—equal; 13. H. A. Leeboddy, Londonderry; Arthur T. Sampson, Maidenhead; and Percy W. Shepherd, Hoyland—equal.

FOR DRAWINGS ILLUSTRATING WORK DONE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. Philip M. Ragg, Shropshire (*Prize*) ; 2. Andrew Scott, Scotland.

SECOND-CLASS HONOURS.—3. Leopold Hay, Poland ; 4. James M. Beattie, New Zealand.

FOR MICROSCOPICAL PREPARATIONS ILLUSTRATING WORK DONE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. Andrew Lee, Earlston ; 2. Wilfred E. Gibbons, Liverpool, and Rhodes Haygarth, Keighley—equal ; 4. D. Russell, Fife, and Andrew Scott, Scotland—equal (*Prizes*) ; 6. William Mitchell, Scotland, and B. L. Seawell, U.S.A.—equal.

SECOND-CLASS HONOURS.—8. P. Deb, Calcutta ; F. O. Mell, India ; Philip M. Ragg, Shropshire ; Percy W. Shepherd, Hoyland ; and James M. Watson, Campbeltown—equal ; 13. Alick H. Algar, Copenhagen ; James M. Beattie, New Zealand ; Henry Reynolds Brown, Argyllshire ; John Gilchrist, Argyllshire ; H. A. Leebody, Londonderry ; John Lewars, Hamilton ; Neil Macvicar, Peeblesshire ; J. Kimber Raymond, Natal ; Arthur T. Sampson, Maidenhead ; R. Douglas Story, Edinburgh ; and W. de W. Wishart, British Guiana—equal.

WINTER SESSION, 1891-92.

FIRST-CLASS HONOURS.—1. Henry Bateson, Bolton (*Medallist*) ; 2. Noel Dean Bardswell, Kingston-on-Thames.

SECOND-CLASS HONOURS.—3. J. Boyd Jamieson, Edinburgh ; 4. Louis Knoblauch, Edinburgh ; and W. J. Penfold, Brampton—equal.

SPECIAL PRIZES FOR MICROSCOPICAL SECTIONS MADE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. G. Laurie Anderson, Brooklyn, N.Y. ; 2. R. S. Cunliffe, Glasgow ; and Louis Knoblauch, Edinburgh—equal (*Prizes*).

SECOND-CLASS HONOURS.—4. Noel Dean Bardswell, Kingston-on-Thames ; and W. J. Penfold, Brampton—equal.

FOR DRAWINGS ILLUSTRATING WORK DONE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. Noel Dean Bardswell, Kingston-on-Thames ; 2. R. S. Cunliffe, Glasgow (*Prizes*).

I. BAYLEY BALFOUR, M.D., D.Sc., *Professor*.

III.—NATURAL HISTORY.

SUMMER SESSION, 1891.

SENIORS.

FIRST-CLASS HONOURS.—J. P. Hill (*Medallist*).

JUNIORS.

FIRST-CLASS HONOURS.—1. J. M. L. Beattie, Colin M'Vicar, M.A., and Robert Pollok, M.A.—equal; 4. A. R. Wilson, M.A. (*Medallists*); 5. E. T. F. Birrell, J. A. Forrest, and J. T. Hewetson—equal; 8. J. A. Milroy and E. G. Richards—equal; 10. W. W. Chipman, M. Dee, Wilfred E. Gibbons, H. E. Smith, and James W. Watson—equal.

SECOND-CLASS HONOURS.—15. G. F. Petrie and Neil M'Vicar—equal; 17. D. M. Mackay; 18. S. H. B. Allison and Harry Fowler—equal; 20. Alex. Dall; 21. T. H. C. Derham and J. E. Rogers—equal; 23. Alex. P. Low; 24. W. J. C. Coulthard, W. J. A. Erskine, and G. Henderson—equal; 27. H. V. Münster; 28. J. K. Raymond; 29. H. Ballantyne and Wm. F. Harvey—equal; 31. Daniel Brough, J. D. Millar, M.A., J. A. Murray, and W. de W. Wishart—equal; 35. C. W. Anderson; 36. Noel Maudsley and J. A. Thwaites—equal.

WINTER SESSION, 1891-92.

FIRST-CLASS HONOURS.—1. C. J. Gorrige (*Medallist*).

SECOND-CLASS HONOURS.—2. G. J. Jenkins; 3. Harry Bateson and D. D. Gold—equal; 5. J. S. Martin; 6. G. F. Henderson and E. F. Wills—equal; 8. G. S. Brown; 9. J. M. Dawson and J. H. Frazer—equal; 11. H. G. Brown; 12. J. B. Blaikie.

ADVANCED ZOOLOGY.

FIRST-CLASS HONOURS.—R. S. M'Dougall, M.A. (*Medallist*).

PRACTICAL ZOOLOGY.

SUMMER SESSION, 1891.

FIRST-CLASS HONOURS.—1. E. T. F. Birrell; 2. J. M. Beattie; 3. W. E. Gibbons and J. A. Murray—equal (*Medallists*); 5. D. Waterston; 6. W. W. Chipman, J. H. Dixon, Neil M'Vicar, J. D. Millar, M.A., R. Pollok, M.A., E. G. Richards—equal; 12. Alex. Dall, J. D. Gilruth, D. J. Jones, J. K. Raymond, E. S. Reid, and A. R. Wilson, M.A.—equal.

SECOND-CLASS HONOURS.—18. John Middleton; 19. James G. Anderson; 20. W. H. Carse and H. A. Norie—equal; 22. W. Mitchell; 23. H. C. Colman and T. H. C. Derham—equal; 25.

Kenneth MacLean; 26. G. F. Cunningham and Frank Gibbon—equal; 28. J. E. H. Bennett, W. J. C. Coulthard, D. M. R. Crichton, M. Dee, Rhodes Haygarth, and J. T. Hewetson—equal; 34. W. J. A. Erskine and J. A. Milroy—equal; 36. H. S. Ballantyne; 37. H. A. Leebody, H. E. Smith, and George Young—equal; 40. H. J. Ewald; 41. E. E. Brierley and J. D. Hamilton—equal; 43. Alex. Steven and W. Stokes—equal; 45. T. N. Johnston; 46. S. H. B. Allison, W. E. Johnston, W. Johnson, Bertram Prentice, A. T. Sampson, and Henry Waters—equal.

WINTER SESSION, 1891-92.

FIRST-CLASS HONOURS.—1. A. D. Peill (*Medallist*); 2. T. G. Elsworth and D. D. Gold—equal.

SECOND-CLASS HONOURS.—4. S. H. Carr; 5. W. F. Eason; 6. John Eason; 7. Alex. W. G. Clark and G. F. Henderson—equal; 9. D. H. Hutchinson.

J. C. EWART, M.D., *Professor*.

IV.—ANATOMY.

STUDENTS OF THE THIRD YEAR.

PRACTICAL ANATOMY—ORAL EXAMINATIONS.

FIRST-CLASS HONOURS.—1. J. B. Duff, Helensburgh, and D. W. Sutherland, Melbourne—equal (*Medallists*); 3. Charles Crerar, Maryport; John Gilchrist, Argyllshire; and W. S. Malcolm, Blairgowrie—equal; 6. C. W. Branch, St Kitts; J. C. Caldwell, Edinburgh; G. A. Dickson, Edinburgh; Thomas Gibson, Victoria; C. A. Hogg, Tasmania; J. G. M'Naughton, Bathgate; Andrew M'Neil, Australia; S. S. Skinner, New Brunswick; J. Purves Stewart, Edinburgh; and John Tennant, M.A., Ayr—equal; 16. R. St G. S. Bond, Wiltshire; W. R. Jackson, M.A., Perth; D. A. Johnstone, Lochmaben; R. H. Makgill, New Zealand; J. D. MacRae, Ross-shire; J. J. Hedley Wood, India; and R. J. T. Wright, M.A., Portobello—equal; 23. W. R. Centre, Aberdeenshire; E. C. Edwards, Woodbridge; W. J. Garbutt, Darlington; Lachlan Grant, Argyllshire; J. K. Richards, Victoria; S. S. Saliba, Syria; and David Thomas, Lockerbie—equal; 30. T. A. Clinch, London; G. A. Murray, Edinburgh; and Tom Pettey, Hampshire—equal; 33. James Anderson, Edinburgh; R. W. Briggs, Derby; Joseph Cookson, Preston; J. Ernest Good, South Australia; J. T. Grant, Edinburgh; A. A. Ross, Kildare; and W. R. Strapp, Natal—equal; 40. E. J. H. Fraser, Hull; John Lawrie, Ayr; T. B. Moore, California; William Porteous, Edinburgh; R. W. Innes Smith, Edinburgh; and C. Gurney-Thompson, Berkshire—equal; 46. A. M. N. Pringle, Aberdeen;

- S. W. Prowse, Canada ; A. P. Ross, Windsor ; and W. B. Turnbull, Aberdeen—equal ; 50. J. R. Gilmour, Edinburgh ; J. M. Morris, Forfarshire ; and J. Muir Paton, Troon—equal ; 53. W. F. M'A. Hewlings, Leicester ; Andrew Philip, Kirkcaldy ; and G. H. Wilson, M.Sc., Penicuik—equal ; 56. W. Y. Grant, Dundee, and D. S. Johnston, Inverness—equal ; 58. E. W. J. Ireland, Tasmania, and T. R. S. Silbald, Dumfriesshire—equal ; 60. William Catto, Aberdeenshire, and David Orr, Edinburgh—equal ; 62. Hugh M'Donald, Glasgow ; 63. J. A. Laing, New Zealand ; 64. G. H. Ruston Harrison, Carlisle, and J. W. Kippen, Perth—equal ; 66. J. V. Forrest, Antigua ; Angelo Trapaga, Mexico ; and J. G. Walker, Calcutta—equal ; 69. T. P. Monteath, Canada.
- SECOND-CLASS HONOURS.—70. D. N. Chatterjee, India, and James Fenton, Perth—equal ; 72. G. R. Livingstone, Edinburgh, and T. A. Glover, Dumfries—equal ; 74. B. R. Craig-Christie, Lanarkshire ; 75. A. J. Macdougall, India ; 76. H. de M. Alexander, Edinburgh, and E. P. Dickin, Shipley—equal.

STUDENTS OF THE SECOND YEAR.

LECTURES ON ANATOMY—WRITTEN EXAMINATIONS.

- FIRST-CLASS HONOURS.—1. James Watson, Mid Calder (*Medallist*) ; 2. Percy J. Henderson, Edinburgh ; 3. James A. Beattie, M.A., New Zealand.

PRACTICAL ANATOMY—ORAL EXAMINATIONS.

- FIRST-CLASS HONOURS.—1. Percy J. Henderson, Edinburgh ; W. L. Martin, M.A., Edinburgh ; and David Rankine, M.A., Auchterderran—equal (*Medallists*) ; 4. W. W. Chipman, Nova Scotia ; Colin Macvicar, M.A., Greenock ; H. A. Leebody, Londonderry ; R. W. Beesley, Preston ; and Thomas Finlay, Edinburgh—equal ; 9. T. M. Bartlett, Jamaica ; T. H. C. Derham, Preston ; Arthur Heys, Bacup ; W. H. Hunter, Edinburgh ; R. S. Mowat, East Lothian ; and Kenneth Maclean, Lanark—equal ; 15. James Gillies, Portree ; B. C. Kelly, Edinburgh ; John Mackinnon, Skye ; and Neil Macvicar, Peeblesshire—equal ; 19. George Drummond, Perthshire ; Simon Fraser, Inverness ; J. A. Parsons, Lincoln ; and J. M. Rutherford, Dumfries—equal ; 23. A. Keith Campbell, Montrose ; D. M. R. Crichton, Leith ; D. F. Dewar, Northumberland ; and T. H. Jamieson, Edinburgh—equal ; 27. J. M. Beattie, M.A., New Zealand ; Thomas Gibson, Clackmannan ; W. E. Johnston, M.A., Cromarty ; and F. G. Proudfoot, Leuchars—equal ; 31. Donald Maclean, Michigan, United States ; R. A. Ross, Londonderry ; and F. W. Taylor, Blackburn—equal ; 34. H. V. Münster, Belfast, and J. A. Macfarlane, Trinidad—equal ; 36. Alexander Dall, Fife ; V. A. Ross, Sutherland ; and W. de W. Wishart, Demerara—equal ; 39. A. J.

Copplestone, Sidmouth; D. J. Graham, Glenboig; C. E. Potter, Glasgow; and J. G. Rodger, B.A., United States—equal; 43. C. Aitken, Stockton-on-Tees; J. K. Jamieson, Shetland; and R. G. Robson, Inverness—equal; 46. John Anderson, Dornoch; J. A. Gibson, Edinburgh; H. E. Huntly, Preston; and F. S. Rose, Orkney—equal; 50. James Affleck, Fort-William; 51. Fred. Porter, Jedburgh, and G. P. Yule, Edinburgh—equal; 53. Wilfred Glegg, Edinburgh, and J. T. Shirlaw, Loanhead—equal.

SECOND-CLASS HONOURS.—55. F. C. F. Kerr, Jamaica; 56. O. H. Chapman, Cleethorpes.

STUDENTS OF THE FIRST YEAR.

LECTURES ON ANATOMY—WRITTEN EXAMINATIONS.

FIRST-CLASS HONOURS.—1. A. D. Macpherson, M.A., Kingussie; 2. J. H. Frazer, M.A., Edinburgh; 3. Edwin Bramwell, Edinburgh; Rhodes Haygarth, Keighley; and J. S. Norwell, B.Sc., Perth—equal (*Medallists*); 6. Thomas Grainger, Yorkshire, and J. T. Hewetson, Cumberland—equal; 8. J. A. Milroy, Wigtownshire; 9. Fred Gardiner, Edinburgh; 10. H. J. Cardale, Plymouth; A. P. Low, Arbroath; and G. F. Whyte, Edinburgh—equal; 13. A. C. Sturrock, Linlithgow, and Andrew Wallace, Prestonpans—equal; 15. A. W. Easmon, Sierra Leone, and J. A. Forrest, Antigua—equal; 17. D. M. Mackay, Hull; 18. James Allison, Carlisle; 19. Arthur Dickson, Montrose; R. M^W. Leith, Cape of Good Hope; R. G. Selby, Cumberland; and James Stenhouse, Edinburgh—equal; 23. J. H. Dixon, Nottingham; F. B. Macdonald, Keith; and W. R. Mander, Oxfordshire—equal; 26. Charles MacLaurin, Sydney; 27. W. J. C. Coulthard, Cumberland; P. C. Lüttig, B.A., Cape; W. Leslie Lyall, Leven; and H. V. Münster, Belfast—equal; 31. James Bannerman, Southport; G. F. Lundie, Cape Colony; and J. L. Marjoribanks, East Lothian—equal; 34. W. E. Gibbons, Liverpool.

SECOND-CLASS HONOURS.—35. James Davidson, Berwick-on-Tweed; 36. John Henderson, Londonderry; 37. J. F. Lindsay, Lanarkshire; B. L. Livingstone-Learmonth, Polmont; Robert Mudie, Forfarshire; A. D. Peill, Madagascar; and J. W. de Vos, South Africa—equal; 42. R. M. Gibson, Paisley, and T. M. Ness, Dundee—equal; 44. W. T. Ritchie, Edinburgh; 45. A. J. W. Buchanan, Edinburgh; J. T. Radley, Liverpool; and Robert Thornton, Arbroath—equal; 48. Campbell Dykes, London, and D. H. Hutchinson, India—equal; 50. T. S. Church, Chatham; 51. A. Y. Greenwood, Mysore; 52. J. M. Dawson, Kinghorn; William Evans, Bolton; and C. E. Stewart, Stirling—equal; 55. Alexander Steven, Edinburgh; 56. J. K. Raymond, Natal; D. R. Rowlands, Llanrhaiadr; and T. D. Sadler, Edinburgh—equal; 59. John Crawford, Ceylon, and W. F. Godfrey, Edinburgh—equal;

61. W. J. Buchanan, Rangoon, and James Kirk, Edinburgh—equal; 63. H. C. Pearson, Tamworth; 64. W. G. C. Geekie, Dumfriesshire.

PRACTICAL ANATOMY—ORAL EXAMINATIONS.

FIRST-CLASS HONOURS.—1. J. H. Dixon, Nottingham; J. A. Forrest, Antigua; Lewis Grant, M.A., Strathspey; and J. S. Norwell, B.Sc., Perth—equal (*Medallists*); 5. H. J. Cardale, Plymouth; J. M. Watson, Campbeltown; Daniel Brough, Musselburgh; J. C. Hastings, Co. Donegal; Rhodes Haygarth, Keighley; and F. B. Macdonald, Keith—equal; 11. W. J. A. Erskine, Edinburgh; Alex. P. Low, Arbroath; Charles MacLaurin, Sydney; J. K. Raymond, Natal; and David Roger, Johnshaven—equal; 16. Albert W. Easmon, Sierra Leone; J. F. Lindsay, Lanarkshire; D. R. Rowlands, Llanrhaidr; and G. F. Whyte, Edinburgh—equal; 20. James Allison, Carlisle; W. J. C. Coulthard, Cumberland; G. F. Lundie, Cape Colony; J. L. Marjoribanks, East Lothian; D. M. Mackay, Hull; H. Carden Pearson, Tamworth; and James Stenhouse, Edinburgh—equal; 27. A. J. W. Buchanan, Edinburgh; Fred. Gardiner, Edinburgh; J. R. W. Robertson, Cumberland, and W. H. Robb, Dumfries—equal; 31. Thomas Grainger, Yorkshire; W. E. Gibbons, Liverpool; Walter Johnson, Preston; E. G. Richards, Forfarshire; Robert Thornton, Arbroath; and J. B. Wilson, Egremont—equal; 37. John Ballantyne, Kirkcudbright; Harry Fowler, Edinburgh; T. H. Macfie, Wigtownshire; and L. A. Williams, Chester—equal; 41. John Henderson, Londonderry; A. G. Naylor, Gloucester; Hugh Richardson, India; and D. C. Wallace, Belfast—equal; 45. James Bannerman, Southport; T. M. Ness, Dundee; Andrew Wallace, Prestonpans; and C. Richardson White, Dumfriesshire—equal; 49. A. M. Fleming, Partick; D. T. R. Jones, Rhymney; W. R. Mander, Oxfordshire; F. W. Price, Shropshire; T. D. Sadler, Edinburgh; and T. H. Stevenson, Londonderry—equal; 55. Arthur Dickson, Montrose; R. M. Gibson, Paisley; Edward Hall, Demerara; J. T. Hewetson, Cumberland; G. E. Stewart, Stirling; and F. S. C. Thompson, Brisbane—equal; 61. F. A. Hardy, Nottingham; H. M. Morton, Longtown; J. A. Milroy, Wigtownshire; and J. A. Shoolbread, Southsea—equal; 65. J. H. Sholto-Douglas, Demerara; A. Y. Greenwood, Mysore; and W. T. Ritchie, Edinburgh—equal; 68. W. J. Buchanan, Rangoon; A. D. Macpherson, M.A., Kingussie; and T. B. Shoolbread, Southsea—equal; 71. William Evans, Bolton; 72. T. S. Church, Chatham; William Mowat, Haddington; Robert Mudie, Forfarshire; and J. T. Radley, Liverpool—equal; 76. George Holliday, Carlisle.

SECOND-CLASS HONOURS.—77. J. F. Holden, Preston, and M. Varis, India—equal; 79. David Wallace, Leith, and W. Leslie Lyall,

Leven—equal; 81. James Kirk, Edinburgh; 82. J. R. Hall Walker, Edinburgh; 83. C. Redwood White, Jamaica.

THE SENIOR MACKENZIE BURSARY was awarded to J. M. Beattie, M.A., New Zealand, and H. V. Münster, Belfast—equal. *Proxime Accessit*.—J. G. Rodger, B.A., United States.

THE JUNIOR MACKENZIE BURSARY was awarded to J. T. Hewetson, Cumberland, and G. F. Whyte, Edinburgh—equal. *Proxime Accessit*.—A. A. C. M'Leod, Jamaica.

THE SENIOR "JOHN AITKEN CARLYLE" BURSARY in Anatomy and Physiology was awarded to James Watson, Mid-Calder.

THE JUNIOR "JOHN AITKEN CARLYLE" BURSARY in Anatomy and Chemistry was awarded to J. A. Milroy, Wigtownshire.

The following gentlemen acted as Prosecutors to the Class:—R. St G. S. Bond, Wiltshire; David Fairweather, John Gilchrist, Argyllshire; Neil Macvicar, Peeblesshire.

PRACTICAL ANATOMY.

SUMMER SESSION, 1891.

SENIOR STUDENTS.

FIRST-CLASS HONOURS. — 1. R. J. T. Wright, M.A., Portobello (*Medallist*); 2. R. L. Mackirdy, Rothesay; 3. D. A. Welsh, Forfarshire; 4. Andrew M'Neil, Sydney; 5. J. B. Duff, Helensburgh, and R. B. Marjoribanks, India—equal; 7. John Steed, Baldock; 8. R. W. Briggs, Derby; 9. C. Crerar, Maryport; and John Kippax, Burnley—equal; 11. S. Saliba, Syria, and W. M'D. Selby, Wigtownshire—equal; 13. J. G. Macnaughton, Bathgate; 14. J. C. Atkinson, Chili; A. H. H. Sinclair, Kenmore; and J. L. Sykes, York-shire—equal; 17. J. D. Duncan, Arbroath, and H. Vaughan-Williams, Flintshire—equal; 19. B. W. Broad, Monmouthshire; J. T. Grant, Edinburgh; and H. H. Khayatt, Egypt—equal; 22. J. E. Good, South Australia; 23. A. H. Moorhead, Mauritius; 24. J. K. Richards, Victoria; 25. Corry Kingdon, Derbyshire; 26. Hugh Douglas, Edinburgh; 27. R. H. Makgill, New Zealand; 28. W. Bannerman, Australia, and F. W. Langton, Sydney—equal.

SECOND-CLASS HONOURS.—30. A. G. F. Forster, Northamptonshire.

STUDENTS OF THE SECOND YEAR.

FIRST-CLASS HONOURS.—1. B. C. Kelly, Newcastle (*Medallist*); 2. W. L. Martin, Edinburgh; 3. A. K. Campbell, Montrose; 4. R. St G. Smallridge Bond, Wiltshire; 5. W. A. Stephen, Ayr; 6. John Forbes, Inverness; 7. James Gillies, Portree; 8. Arthur Foster, Blackburn; Fred. Kerr, Jamaica; and E. R. Craig Christie, Lanarkshire—equal.

SECOND-CLASS HONOURS.—11. T. H. Jamieson, Edinburgh.

John MacIver, Stornoway, who was unavoidably absent on one occasion, obtained First-class Honours in the other examinations.

WM. TURNER, KT., M.B., D.C.L., *Professor.*

V.—INSTITUTES OF MEDICINE.**SENIOR.**

FIRST-CLASS HONOURS.—1. C. Crerar, Cumberland; 2. J. W. T. Walker, Newport-on-Tay; 3. J. Kippax, Lancashire (*Medallists*); 4. A. Balfour, Edinburgh; 5. M. M'Larty, Scotland; 6. E. H. Fraser, Hull; 7. W. R. Jackson, M.A., Perth; 8. T. Gibson, M.A., Perth.

SECOND-CLASS HONOURS.—9. R. H. Makgill, New Zealand, and W. Riach, Edinburgh—equal; 11. J. F. Macphail, Scotland; 12. J. P. Stewart, Edinburgh; 13. R. M. Clark, Perthshire; W. M'D. Selby, Wigtownshire; and S. S. Skinner, Canada—equal; 16. L. Grant, Johnstone; 17. J. G. Macnaughton, Bathgate; 18. J. M. Menzies, Edinburgh; 19. W. C. Anderson, Scotland; A. H. Moorhead, Mauritius; A. Philip, Kirkcaldy; and S. W. Prowse, Canada—equal; 23. M. B. Steuart, Edinburgh; 24. G. E. Gabites, New Zealand; 25. E. P. Dickin, Shipley, Yorks; J. Pearse, Madagascar; and A. P. Stevenson, Darlington—equal; 28. W. D. Adams, Scotland; A. M. Fleming, Edinburgh; and R. M'Camon, Stranraer—equal; 31. W. T. Grant, Cairo; 32. R. St. G. S. Bond, Wiltshire; W. Bethune, Lochgelly; and H. A. C. Davidson, Caithness—equal.

JUNIOR.

FIRST-CLASS HONOURS.—1. J. Watson, Mid Calder; 2. A. K. Campbell, Montrose, and J. M. Dalziel, India—equal (*Medallists*); 4. J. E. Bowes, Notts, and R. Pollok, M.A., Leith—equal; 6. W. A. Stephen, Ayr; 7. N. Macvicar, Peeblesshire; 8. S. H. B. Allison, Ireland, and C. Macvicar, Argyllshire—equal; 10. J. M. Beattie, New Zealand; S. Fraser, Scotland; and C. Kerr, Dundee—equal; 13. T. M. Bartlett, Jamaica, and T. Finlay, Edinburgh—equal.

SECOND-CLASS HONOURS.—15. W. W. Chipman, Nova Scotia, and T. H. Jamieson, Edinburgh—equal; 17. J. D. Gregorson, Argyllshire, and P. J. Henderson, Edinburgh—equal; 19. T. H. C. Derham, England; 20. R. S. Mowat, Haddington; 21. W. E. Johnstone, Cromarty, and J. Kelly, Dundee—equal; 23. R. W. Beesley, Preston; 24. A. J. Campbell, Selkirk; 25. A. J. Macintosh, Edinburgh; 26. H. V. Münster, Belfast; 27. J. A. Gibson, Peebles; V. A. Ross, Sutherland; S. M. Saliba, Lebanon; and R. S. Selby, Cumberland—equal; 31. E. D. W. Greig, Edinburgh, and R. T. Herdman, Edinburgh—equal; 33. C. F. Lassalle,

Trinidad, West Indies ; 34. R. A. Ross, Cootehill ; 35. F. C. F. Kerr, Jamaica ; 36. D. M. R. Crichton, Leith ; J. Scott, Scotland ; and P. D. Smith, Tasmania—equal.

PRACTICAL PHYSIOLOGY.

SUMMER SESSION, 1891.

FIRST-CLASS HONOURS.—1. J. E. Bowes, Langley Mill, Notts ; 2. R. S. Mowat, Haddington ; 3. S. Fraser, Inverness ; 4. A. M. Pringle, Aberdeen (*Medallists*) ; 5. T. R. S. Sibbald, Thornhill ; 6. D. Thomas, Lockerbie, and W. B. Turnbull—equal ; 8. Keith Campbell, Montrose, and A. Philip, Kirkcaldy—equal ; 10. A. Croll, Dundee, and J. Tennant, Ayr—equal.

SECOND-CLASS HONOURS.—12. J. M. Dalziel, India ; 13. A. Gwyther, India ; 14. A. Heys, England ; 15. T. Gibson, Victoria ; T. H. Jamieson, Edinburgh ; A. Kennedy, Scotland ; and J. M. Rutherford—equal ; 19. T. D. Forbes, Berwick, and D. J. Graham, Cardross—equal ; 21. A. Foster, Blackburn, and J. M. Paton, Troon—equal ; 23. R. St G. S. Bond, Wiltshire ; T. Finlay, Edinburgh ; and J. Lawrie, Ayr—equal ; 26. J. Anderson, Edinburgh ; E. C. Edwards, Woodbridge ; and C. Hardcastle, Yorkshire—equal ; 29. E. Samut, Malta ; 30. J. M'K. Wishart, Largs ; 31. J. M. Malcolm, Blairgowrie ; 32. L. C. Edwards, Liverpool ; 33. J. Hume, Perth ; 34. S. S. Messulam, Constantinople ; 35. W. Leslie, Glasgow.

PRIZE FOR HISTOLOGICAL DRAWINGS.—J. M'K. Wishart, Largs.

WINTER SESSION, 1891-92.

FIRST-CLASS HONOURS.—1. R. Pollok, M.A., Leith (*Medallist*) ; 2. W. Glegg, Scotland ; 3. E. D. W. Greig, Edinburgh.

SECOND-CLASS HONOURS.—4. B. L. Seawell, U.S. America ; 5. J. Mackinnon, Skye ; 6. F. C. F. Kerr, Jamaica ; 7. W. de W. Wishart, Demerara ; 8. W. Riach, Edinburgh ; 9. D. J. Burt, New Zealand ; 10. A. C. Lupton, Halifax.

WILLIAM RUTHERFORD, M.D., *Professor.*

VI.—MATERIA MEDICA.

FIRST-CLASS HONOURS.—1. John B. Duff, Helensburgh ; 2. T. Pettey, Hampshire ; 3. James Pearse, Madagascar ; and W. R. Center, Aberdeen—equal ; 5. Edward Crarer, Blairgowrie ; 6. W. F. M'Allister-Hewlings, Leicester (*Medallists*) ; 7. John S. Flett, Kirkwall ; 8. R. H. Makgill, New Zealand ; David Thomas, Lockerbie ; and J. T. Grant, Edinburgh—equal ; 11. C. Crerar, Maryport ; and John Sorley, St Andrews—equal.

SECOND-CLASS HONOURS.—13. James D. MacRae, Ross-shire ; 14. C. A. Hogg, Tasmania, and John Kippax, Lancashire—equal ; 16.

E. Ireland, Tasmania; A. M. N. Pringle, Scotland; J. Purves-Stewart, Edinburgh; and W. B. Turnbull, Aberdeen—equal; 20. J. C. Caldwell, Edinburgh; Andrew Croll, Forfarshire; and John Steed, Hertfordshire—equal; 23. Andrew Balfour, Edinburgh; and William Bethune, Lochgelly—equal; 25. Malcolm M'Larty, Scotland; 26. William M'D. Selby, Wigtownshire; and R. W. Innes Smith, Edinburgh—equal; 28. Evan Jones, Wales; and J. M. Menzies, Edinburgh—equal; 30. David J. Burt, New Zealand, and W. Russell Strapp, Natal—equal; 32. William B. Craig, M.A., Musselburgh; E. H. Fraser, Hull; and Sir Bhagvat S. Jareja, Gondal—equal; 35. Charles Kerr, Scotland, and J. G. M'Naughton, Bathgate—equal; 37. P. D. Fick, South Africa; A. H. Moorhead, Mauritius; George A. Murray, Scotland; and James M'K. Wishart, Scotland—equal; 41. A. Gwyther, India; D. S. Johnston, Inverness; T. P. Monteath, Canada; and J. M. Morris, Forfarshire—equal; 45. W. C. Anderson, Scotland; 46. T. A. Clinch, London; E. C. Edwards, Woodbridge; and F. B. Oliphant, England—equal; 49. F. P. Hearder, Carmarthen; J. Lloyd Owen, North Wales; and H. S. Walsh, Blackburn—equal; 52. John Clark, Sorn; J. A. Parsons, Lincoln; and C. H. Ridley, Demerara—equal; 55. E. D. W. Greig, Edinburgh; 56. T. G. Lusk, Ireland; 57. E. P. Dickin, Shipley, Yorks, and Andrew Philip, Kirkcaldy—equal; 59. Hugh Douglas, Newcastle, and A. P. Stevenson, Darlington—equal; 61. C. J. H. Aitken, Edinburgh; A. M. Fleming, Edinburgh; John Hume, Perth; Wm. S. Malcolm, Blairgowrie; John H. Seon, Trinidad; and J. J. H. Wood, India—equal.

F. Harwood Hardman, England, obtained 63 per cent. in two of the class examinations, but was unable to be present at the third.

PRACTICAL MATERIA MEDICA.

SUMMER SESSION, 1891.

FIRST-CLASS HONOURS.—1. Wm. Bethune, Lochgelly; 2. James Pearse, Madagascar; 3. W. R. Center, India; 4. John A. Gil-mour, Edinburgh (*Medallists*); 5. J. P. Stewart, Edinburgh; 6. H. M'Donald, Glasgow; 7. Andrew Balfour, Edinburgh.

SECOND-CLASS HONOURS.—8. A. M. Pringle, Aberdeen; 9. E. R. Dodds, London; 10. John B. Duff, Helensburgh; 11. J. M. Menzies, Edinburgh; 12. David Thomas, Lockerbie, and W. R. Strapp, Natal—equal; 14. R. H. Makgill, Scotland; 15. W. M'D. Selby, Wigtownshire; 16. Andrew Croll, Dundee; 17. John Kippax, Burnley; 18. Charles P. Stewart, Perth; 19. R. St G. S. Bond, Wiltshire; 20. R. T. Davidson, Edinburgh; 21. James M'K. Wishart, Largs; 22. George A. Murray, Edinburgh; 23. D. S. Johnston, Inverness-shire; 24. Walter B. Turnbull, Aberdeen; 25. C. W. Branch, West Indies; 26. Sir Bhagvat Singh

Jareja, Gondal, India; 27. James Watson, Mid-Calder; 28. Cecil E. Salt, Shrewsbury; 29. Colin H. Ridley, Georgetown; 30. John Lawrie, Ayr.

THOMAS R. FRASER, M.D., *Professor.*

VII.—GENERAL PATHOLOGY.

SENIOR DIVISION.

SECOND-CLASS HONOURS.—I. H. Vaughan Williams.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. John Tennant, M.A., Ayr; 2. C. A. Hogg, Tasmania; 3. R. H. Makgill, New Zealand; 4. John Steed, Herts (*Medallists*); 5. C. Crerar, Maryport; 6. J. Purves-Stewart, Edinburgh; 7. S. W. Prowse, Canada.

SECOND-CLASS HONOURS.—8. John B. Duff, Helensburgh, and David Thomas, Lockerbie—equal; 10. E. Hewat Fraser, Hull; 11. John R. Gilmour, Edinburgh, and E. Ireland, Tasmania—equal; 13. W. M'D. Selby, Wigtownshire; 14. F. V. Thomas, India, and J. T. Grant, Edinburgh—equal; 16. W. R. Strapp, Natal; 17. R. W. Blair, Dunfermline; Andrew Balfour, Edinburgh; M. M'Larty, Greenock; and A. H. Moorhead, Mauritius—equal; 21. T. Pettey, Hampshire; W. F. M'Allister-Hewlings, Leicester; and A. M. N. Pringle, Aberdeen—equal; 24. Hugh Douglas, Walker-on-Tyne; 25. T. B. Moore, New Brunswick; 26. T. A. Clinch, London; 27. W. B. Craig, M.A., Musselburgh; J. M. Morris, Forfarshire; J. Lloyd Owen, Wales; and D. S. Johnston, Inverness—equal; 31. James Pearse, Madagascar; 32. C. J. H. Aitken, Edinburgh; 33. A. M. Fleming, Edinburgh; 34. J. G. M'Naughton, Bathgate, and John Clark, Troon—equal; 36. W. B. Turnbull, Aberdeen; 37. J. M. Menzies, Edinburgh; 38. Colin H. Ridley, Demerara; 39. David Murray, Hawick, and Charles Kerr, Scotland—equal.

F. Harwood Hardman, Yorkshire, being an average on two examinations.

PRACTICAL PATHOLOGY.

SUMMER SESSION, 1891.

SENIOR DIVISION.

FIRST-CLASS HONOURS.—I. D. A. Welsh, Forfarshire (*Medallist*).

SECOND-CLASS HONOURS.—2. J. M. Nicoll, Caithness-shire; 3. C. E. Stephens, Devonshire.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. J. Steed, Baldock; 2. A. Pringle, Aberdeen; 3. T. R. S. Sibbald, Dumfriesshire; 4. J. P. Stewart, Edinburgh (*Medallists*); 5. John B. Duff, Helensburgh; 6. John

Clark, Lorn, and Andrew Philip, Kirkcaldy—equal ; 8. Lachlan Grant, Johnstone ; 9. Charles, Kerr, Dundee ; 10. David Thomas, Lockerbie, and E. H. Fraser, England—equal ; 12. John Kippax, Burnley ; W. M'D. Selby, Wigtownshire ; J. A. Coutts, Aberdeenshire ; and E. R. Dodds, London—equal ; 16. F. V. Thomas, India, and A. M'Neil, Australia—equal.

SECOND-CLASS HONOURS.—18. Hugh Douglas, Newcastle-on-Tyne ; R. W. Briggs, Derby ; Andrew Balfour, Edinburgh ; and Thomas Gibson, Victoria—equal ; 22. C. W. Branch, St Kitts ; A. H. Moorhead, Mauritius ; Thomas Gibson, M.A., Strabane, Co. Tyrone ; and J. T. Grant, Edinburgh—equal ; 26. James Pearse, Madagascar ; 27. D. A. Turkhud, Bombay ; and J. M. Paton, Troon—equal ; 29. H. U. Duncan, Leslie, and B. H. Price, India—equal ; 31. C. W. M'Intosh, Kirkcaldy ; C. Crerar, Maryport ; and M. M'Larty, Scotland—equal ; 34. J. M. Menzies, Edinburgh ; R. M. Clark, Perthshire ; and R. K. Tandan, India—equal ; 37. N. C. Das, Bengal ; A. Croll, Dundee ; and W. B. Turnbull, Aberdeen—equal ; 40. H. M'Donald, Glasgow ; 41. D. Smellie, Edinburgh ; 42. C. J. H. Aitken, Scotland ; 43. C. H. Ridley, Georgetown, and W. E. Scott-Moncrieff, Dalkeith—equal ; 45. W. B. Craig, M.A., Musselburgh ; 46. R. M'Camon, Stranraer ; Sir Bhagvat Singh Jareja, India ; J. Ernest Good, South Australia ; and D. S. Johnston, Inverness—equal ; 50. J. G. M'Naughton, Bathgate ; John Hume, Perth ; and J. C. Caldwell, Scotland—equal ; 53. John Lawrie, Ayr ; 54. John R. Gilmore, Scotland ; D. M. Ferguson, Edinburgh ; and E. C. Robertson, Scotland—equal ; 57. T. B. Kenny, Trinidad, and A. J. Macdougall, India—equal ; 59. W. R. Jackson, Perth, and W. H. Thomson, India—equal ; 61. T. D. Forbes, Berwick-on-Tweed ; 62. R. W. Innes Smith, Edinburgh.

WINTER SESSION, 1891-92.

FIRST-CLASS HONOURS.—1. John S. Flett, Kirkwall, and W. S. Malcolm, Liff—equal.

SECOND-CLASS HONOURS.—3. A. Gwyther, India, and J. M. Morris, Forfarshire—equal ; 5. James Scott, Dundee ; 6. W. D. Adams, Edinburgh ; 7. D. N. Chatterjee, India.

Pro W. S. GREENFIELD, M.D., *Professor*.
W. H. BARRETT, M.B., C.M.

VIII.—SYSTEMATIC SURGERY.

SENIORS.

FIRST-CLASS HONOURS.—1. J. H. Murray, Montrose ; 2. Peter W. Shaw, Perthshire ; 3. Alfred G. Talbot, New Zealand ; 4. George Home, New Zealand (*Medallists*) ; 5. M. G. Naidu, India ; 6. L. J. H. Oldmeadow, Tasmania ; 7. E. S. Littlejohn, B.A., Sydney,

and Vincent Green, London—equal; 9. A. Ingram, Stranraer; 10. P. G. Cilliers, Cape of Good Hope, and John L. Martin, Singapore—equal; 12. J. L. Dick, Edinburgh; George H. Dupont, Grantham; W. A. Rutherford, Yorkshire; and Alban Ward, Bristol—equal; 16. J. G. Christie, M.A., Forfarshire, and J. L. Russell, Mid-Lothian—equal.

SECOND-CLASS HONOURS.—18. James M'Kerrow, Wigan; 19. C. H. Bond, Wiltshire; George Dickson, Dumfriesshire; E. C. Dobie, Chester; and James A. Fullarton, B.A., New Zealand—equal; 23. D. G. M. Munro, Inverness, and George Phillips, London—equal; 25. G. W. F. Macnaughton, Tranent; 26. J. R. Higson, Ashton-upon-Ribble; James M'Clew, Portpatrick; and A. J. Wheatley, Yorkshire—equal; 29. J. M. Nicoll, Wick, and W. P. Simpson, Edinburgh—equal; 31. J. C. Brown, Leith; E. G. Fortune, Fife; William Gray, Denny; Murray Gillespie, Kirkcudbrightshire; T. B. Hearder, Edinburgh; A. Mackintosh, Inverness; and T. G. Sloan, Edinburgh—equal; 38. Robert Knox, Leith; C. E. Maude, New Zealand; T. E. Nuttall, Accrington; and D. A. Turkhud, Bombay—equal; 42. A. Hill Buchan, Edinburgh, and A. H. M. Macmorran, Newton-Stewart—equal; 44. R. W. Duncan, Cornwall, and James Stoddart, Edinburgh—equal; 46. D. B. Hewat, Cape Town; J. H. Johnston, Yorkshire; F. W. Langton, Australia; T. M. Martin, Lanarkshire; Ahmed Mirza, Hyderabad; and R. Scheult, Trinidad—equal; 52. D. W. K. Lyall, Dacca; 53. C. J. Hugo, Cape Colony, and Herman Schmitz, Yorkshire—equal; 55. W. H. Parkes, New Zealand; 56. H. P. D'A. Benson, Australia; G. R. Denton, Yorkshire; M. H. Foye, Ireland; and G. P. Humphery, Bath—equal; 60. D. Reid Crow, Argyllshire; N. Chandra Das, Calcutta; and Hugh Ross, Ross-shire—equal; 63. Herbert D. Coles, Bournemouth; 64. W. C. Fraser, Ross-shire.

JUNIORS.

FIRST-CLASS HONOURS.—1. Joseph E. Bowes, Notts; 2. James M. Beattie, New Zealand; 3. A. Keith Campbell, Montrose; 4. John Forbes, M.A., Inverness (*Medallists*); 5. J. Stewart Norwell, B.Sc., Perth; 6. W. A. Stephen, Ayr; 7. S. H. B. Allison, Londonderry; 8. Percy J. Henderson, Edinburgh; 9. Neil Macvicar, Peeblesshire; 10. Colin M'Vicar, M.A., Greenock; 11. T. Hill Jamieson, Edinburgh; 12. T. M. Bartlett, Jamaica; 13. James M. Rutherford, Dumfries; 14. A. J. Campbell, Duns; 15. Robert Cochrane, Larbert; 16. Harold V. Münster, Belfast.

SECOND-CLASS HONOURS.—17. W. W. Chipman, Nova Scotia; 18. D. F. Laidlaw, Victoria; 19. D. J. Graham, Glenboig; 20. W. Harry Hunter, Edinburgh; 21. C. Crawford Aitken, Stockton-on-Tees; 22. P. M. Ragg, Great Yarmouth; 23. S. Fraser, Inverness; 24. George M'Gibbon, Wigtownshire; 25. Percy. T.

- Hughes, Darlington ; 26. Walter E. Johnstone, M.A., Cromarty ; 27. C. F. Lassalle, Trinidad ; 28. Ronald T. Herdman, Edinburgh ; 29. E. G. Richards, Eskbank ; 30. William Begg, Victoria ; 31. R. S. Mowat, Haddington ; 32. Victor A. Ross, Sutherland ; 33. E. Croft Watts, Isle of Wight ; 34. William Haig, Fife ; 35. James A. Gibson, Edinburgh ; 36. F. C. F. Kerr, Jamaica ; 37. A. M. Staffer, Dumfriesshire ; 38. W. de W. Wishart, British Guiana ; 39. G. N. Alexis, Grenada ; 40. D. M. R. Crichton, Leith ; 41. T. Henry Jones, Chester ; 42. R. Adolphus Ross, Londonderry ; 43. John Gilchrist, Argyllshire ; 44. Osmund H. Chapman, Cleethorpes ; 45. William Leslie, Glasgow ; 46. James Watson, Mid-Calder ; 47. Alexander Dall, Edinburgh ; 48. Albert G. Fenn, Madrid ; 49. F. H. Fairweather, Huddersfield ; 50. David Landsborough, Kilmarnock.
- R. H. Armstrong, Lancashire, and A. R. Wilson, M.A., Edinburgh, were present at three of the four Class Examinations, and obtained First-Class Honours.
- HONOURS are given in both Divisions of the Class of Systematic Surgery on the combined results of the Written and Practical Examinations.

PRACTICAL SURGERY.

SENIORS.

MEDALLIST.—J. H. Murray, Montrose.

PROXIME ACCESSERUNT.—George Home, New Zealand ; Peter W. Shaw, Perthshire ; Vincent Green London.

HONOURS.—E. S. Littlejohn, B.A., Sydney ; George Dickson, Dumfriesshire ; W. P. Simpson, Edinburgh ; J. H. Johnston, Yorks ; James M'Clew, Portpatrick ; G. W. F. Macnaughton, Tranent ; Alfred G. Talbot, New Zealand ; C. H. Bond, Wiltshire ; James M'Kerrow, Wigan ; E. C. Dobie, Chester ; J. L. Martin, Singapore ; T. M. Martin, Lanarkshire ; P. G. Cilliers, Cape of Good Hope ; A. Ingram, Stranraer ; J. L. Russell, Mid-Lothian ; Geo. Phillips, London ; T. G. Sloan, Edinburgh.

DAVID WALLACE, M.B., *Demonstrator.*

PRACTICAL SURGERY.

JUNIORS.

MEDALLIST.—Percy J. Henderson, Edinburgh.

PROXIME ACCESSERUNT.—Joseph E. Bowes, Notts ; Harold V. Münster, Belfast.

HONOURS.—James M. Beattie, New Zealand ; W. W. Chipman, Nova Scotia ; John Forbes, M.A., Inverness ; D. J. Graham, Glenboig ; T. Hill Jamieson, Edinburgh ; D. F. Laidlaw, Victoria ; Neil Macvicar, Peeblesshire ; Colin M'Vicar, M.A.,

Greenock ; J. Stewart Norwell, B.Sc., Perth ; James M. Rutherford, Dumfries ; W. A. Stephen, Ayr ; A. R. Wilson, M.A., Edinburgh ; W. de W. Wishart, British Guiana.

HAROLD J. STILES, M.B., *Demonstrator.*

James M. Rutherford, Dumfries ; F. C. F. Kerr, Jamaica ; and Robert Bruce, Edinburgh, acted as Class Assistants.

JOHN CHIENE, M.D., *Professor.*

IX.—MIDWIFERY.

SENIORS.

FIRST-CLASS HONOURS.—1. R. Murray Leslie, Scotland (*Medallist*) ; 2. R. E. Adamson, England ; 3. A. M'Ewan, Scotland ; 4. C. C. Easterbrook, England ; 5. W. C. Fraser, Scotland ; 6. W. C. C. Kirkwood, Scotland ; T. M. Martin, Scotland, and R. Scheult, Trinidad—equal.

SECOND-CLASS HONOURS.—9. R. Knox, Scotland, and E. S. Littlejohn, Australia—equal ; 11. J. Field Hall, England, and A. Ingram, Scotland—equal ; 13. William Robertson, England, and J. M'Kerrow, England—equal ; 15. E. C. Dobie, England ; 16. E. G. Fortune, Scotland ; 17. A. Macbeth Elliot, South America ; 18. T. C. Guthrie, Scotland ; 19. J. Stoddart, Scotland ; 20. W. A. Hardiker, England.

JUNIORS.

FIRST-CLASS HONOURS.—1. J. Lawson Dick, Scotland ; 2. J. A. Fullarton, New Zealand ; 3. J. F. Carruthers, Scotland, and J. J. Evans, Wales—equal (*Medallists*) ; 5. J. L. Russell, Scotland ; H. Walker, Scotland, and J. K. Watson, England—equal ; 8. J. W. Craig, Scotland ; Alexander Douglas, England ; W. B. Gow, Scotland ; R. Hutchinson, Scotland ; L. Boon Keng, Singapore, and P. O. Malabre, Jamaica—equal ; 14. J. H. Murray, Scotland ; 15. J. G. Christie, Scotland, and A. Walker, Scotland—equal ; 17. S. G. Davidson, Scotland ; and G. Newman, England—equal ; 19. C. Parker, Tasmania, and J. Clark Wilson, Scotland—equal ; 21. W. M. Brunton, Scotland ; D. C. Edington, Scotland ; R. L. Guthrie, Scotland ; R. Proudfoot, Scotland ; A. G. Talbot, New Zealand ; and Meredith Young, Scotland—equal ; 27. J. R. Armstrong, Wales ; C. H. Bond, England ; T. B. Hearder, Scotland ; C. J. Hugo, South Africa ; B. S. Jareja, India ; C. K. Millard, England ; L. J. H. Oldmeadow, Tasmania ; and D. A. Turkhud, India—equal ; 35. D. B. Hewat, South Africa ; J. M'Donald, Scotland ; J. Owen, Wales ; G. S. Shirt, India ; W. M. Talbot, Scotland ; and J. B. Thomson, New Zealand—equal ; 41. W. A. J. Alexander, Scotland ; L. B. Beddie, Scotland ; H. P. D'A. Benson, Australia ; F. H. A. Clayton, England ; J. O. Coker, West Africa ; G. P.

Coldstream, India; R. W. Duncan, England; G. H. Dupont, England; M. H. Foye, Ireland; D. Fraser, England; G. B. Mathieson, Scotland; J. M. Nicoll, Scotland; C. P. Stewart, Scotland; Cuthbert Thompson, Ireland; F. J. du Toit, South Africa; J. Wallace, Scotland; and J. R. Whait, England—equal.

SECOND-CLASS HONOURS.—58. T. A. Granger, Scotland; R. J. Johnston, Scotland; and W. M. Robertshaw, England—equal; 61. D. H. Burn, Scotland; H. D. Coles, England; G. Dickson, Scotland; W. Fletcher, England; G. Home, New Zealand; R. Maxwell, Tasmania; J. M'Clew, Scotland; W. A. Rutherford, England; and W. Young, New Zealand—equal; 70. W. H. Parkes, New Zealand; 71. A. R. Bankart, Wales; A. B. Carosso, Australia; H. H. Hadden, Ireland; W. Scott, Scotland; W. P. Simpson, Scotland; and R. H. Watson, Scotland—equal; 77. F. J. Hare, England; D. G. Munro, Scotland; H. Schmitz, England; and W. J. White, Scotland—equal; 81. W. C. Anderson, Scotland, and M. Gillespie, Scotland—equal; 83. F. M. Fellows, England; G. M. M'Gibbon, Scotland; G. Peterkin, England; J. D. Pollock, Scotland; T. G. Sloan, Scotland; Charles Thomson, India; and F. B. Barber, West Africa—equal; 90. W. Forsyth, Scotland; J. H. Johnston, England; H. Latham, England; G. W. F. Macnaughton, Scotland; T. E. Nuttall, England; C. F. Ponder, Scotland; and W. Sproule, Australia—equal; 97. G. Halley, Scotland; J. R. Higson, England; A. Macnicol, Scotland; and A. H. Vizard, West Indies—equal; 101. G. J. Auburn, England; G. Bell, England; D. R. Crow, Scotland; N. C. Das, India; and C. C. B. Tyrie, Scotland—equal; 106. J. R. Liddell, Scotland, and R. Rendall, Scotland—equal; 108. J. H. M'Donald, India; A. V. Macgregor, Scotland; and R. M. Truter, South Africa—equal; 111. S. Davidson, Scotland; E. L. Phillips, England; and T. J. Thomson, Scotland—equal; 114. A. Mackintosh, Scotland; 115. P. V. Locke, Straits Settlements; 116. R. Kenyon, Scotland; 117. G. C. Sandford, England; 118. D. W. K. Lyall, India; 119. C. W. A. Jones, Australia.

The following were present in only two of the examinations:—

1. G. Crarer, Scotland; 2. G. F. Longbotham, England; 3. J. D. M'Latchie, Scotland; 4. S. G. Morris, Wales.

OPERATIVE MIDWIFERY AND GYNECOLOGY.

SUMMER SESSION, 1891.

FIRST-CLASS HONOURS.—W. Murray Cairns, Liverpool (*Medallist*); Robert Cran, Tain; A. Nakagawa, Japan; Edward Millar Steven, Montrose.

SECOND-CLASS HONOURS.—W. H. Gregory, Manchester.

A. R. SIMPSON, M.D., *Professor*.

X.—PRACTICE OF PHYSIC.

SENIOR DIVISION.

FIRST-CLASS HONOURS.—1. Donald Macaulay, M.A., Ross-shire, and R. Murray Leslie, M.A., B.Sc., Ross-shire—equal ; 3. Peter W. Shaw, Perthshire (*Medallists*) ; 4. Robert A. Corson, Scotland ; J. S. Fowler, Fifeshire ; and John L. Martin, Singapore—equal ; 7. Harry Whittome, Cambridgeshire ; 8. R. J. Johnston, Edinburgh ; 9. A. G. Talbot, New Zealand ; 10. R. E. Evans, Scotland ; 11. E. C. Dobie, Chester, and W. S. Gibb, Edinburgh—equal.

SECOND-CLASS HONOURS.—13. George Johnstone, Carlisle ; Adam H. M. Macmorran, Scotland ; and David Melville, Dundee—equal ; 16. C. W. Donald, Orkney ; Alexander M'Ewen, Perthshire ; and M. G. Naidu, India—equal ; 19. James L. Thompson, Victoria ; 20. H. P. D'A. Benson, Queensland ; J. C. Brown, Leith ; Robert Knox, Leith ; Alban Ward, England ; and Victor Werdmüller, South Africa—equal ; 25. J. Field Hall, West Bromwich, and C. F. Ponder, Edinburgh—equal ; 27. Walter T. Fox, England, and Raoul Scheult, Trinidad—equal ; 29. George Bill, Victoria ; John W. P. Boyd, Edinburgh ; W. S. Campbell, Argyllshire ; P. G. Cilliers, Cape Colony ; J. R. Foster, Yorkshire ; W. C. C. Kirkwood, Scotland ; D. A. Turkhud, Bombay ; and J. B. Yeoman, St Andrews—equal ; 37. R. H. Armstrong, England, and D. C. Bremner, Edinburgh—equal ; 39. William Fletcher, Stratford-on-Avon, and G. L. K. Pringle, Edinburgh—equal ; 41. J. G. Macindoe, Rothesay ; 42. Albert Cameron, Moscow, and R. W. Fell, England—equal ; 44. Donald G. Campbell, Argyllshire, and T. Muirhead Martin, Scotland—equal ; 46. T. C. Guthrie, Scotland ; R. B. Martin, Carlisle ; and W. H. Wilson, Yorkshire—equal ; 49. E. Blake Garland, Derby, and G. St Clair Thom, Dollar—equal ; 51. William Forsyth, Edinburgh, and George W. Park, England—equal ; 53. A. N. S. Carmichael, Edinburgh, and L. U. Young, Scotland—equal ; 55. C. E. Maude, New Zealand ; 56. Ahmed Mirza, Deccan, and C. D. Simitopoulos, Smyrna—equal ; 58. D. W. K. Lyall, India.

UNAVOIDABLY ABSENT FROM ONE EXAMINATION.

SECOND-CLASS HONOURS.—F. Van Langenberg, Ceylon ; A. Macheth Elliot, Chili.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. Robert Hutchison, Kirkliston ; 2. Louis G. Irvine, M.A., Arbroath ; 3. Alexander M. Easterbrook, London, and James A. Fullarton, B.A., New Zealand—equal ; 5. James F. Carruthers, Inverness, and Hugh Walker, Renfrewshire—equal (*Medallists*) ; 7. P. O. Malabre, Jamaica ; 8. George Home, New

Zealand; J. E. Moorhouse, Yorkshire; and Meredith Young, Lancashire—equal; 11. Alexander Douglas, Northumberland, and J. J. Evans, Wales—equal; 13. Alexander R. Moon, Dundee; 14. James G. Christie, Forfarshire; D. C. Edington, Scotland; John Wallace, Fife; and J. Clark Wilson, Scotland—equal; 18. L. B. Beddie, Aberdeenshire, and T. G. Sloan, Scotland—equal; 20. Arthur Fell, Ramsgate; Percival V. Locke, Straits Settlement; and J. Lawson Russell, Mid-Lothian—equal; 23. J. R. Armstrong, Wales; J. Lawson Dick, Edinburgh; George H. Dupont, Grantham; W. Duncan Laurie, Bradford; G. W. F. Macnaughton, Tranent; and C. C. Baxter Tyrie, Scotland—equal.

SECOND-CLASS HONOURS.—29. F. H. A. Clayton, England; George P. Coldstream, India; Sir B. S. Jareja, India; Frank H. G. Hutchinson, England; J. H. Murray, Montrose; L. J. H. Oldmeadow, Tasmania; James V. Paterson, Sanquhar; and M. W. Talbot, Preston Patrick—equal; 37. W. A. J. Alexander, M.A., East Lothian; Vincent Green, London; and Charles Thomson, India—equal; 40. George Halley, Scotland, and D. B. Hewat, South Africa—equal; 42. J. O. Coker, West Africa; T. B. Hearder, Edinburgh; C. J. Hugo, Cape Colony; F. Lishman, England; G. S. Longbotham, Yorkshire; James M'Donald, Scotland; T. M. Nair, India; George Newman, England; and J. K. Watson, Yorkshire—equal; 51. C. H. Bond, Wiltshire; Samuel G. Davidson, Scotland; George Dickson, Dumfriesshire; R. L. Guthrie, Scotland; H. H. Hadden, Ireland; J. C. Maxwell, Dundee; D. G. M. Munro, Inverness; Robert Proudfoot, Dumfriesshire; and C. P. Stewart, Scotland—equal; 60. J. W. Craig, Kirkcudbrightshire; Thomas Fentem, England; T. A. Granger, Aberdeen; John Owen, Wales; William Scott, Laurencekirk; and William Somerville, Scotland—equal; 66. A. B. Jesser Coope, New Zealand; Cuthbert Thompson, Londonderry; and William Young, New Zealand—equal; 69. William C. Anderson, Scotland, and N. C. Das, Bengal—equal; 71. W. E. Foggie, Scotland; Robert Hanton, Cranston; A. Mackintosh, Scotland; and George E. Shirt, India—equal; 76. D. H. Burn, Arbroath; A. B. Carvosso, Queensland; John D. Duncan, Arbroath; M. H. Foye, Ireland; J. A. Hamilton, Birkenhead; and James M'Clew, Wigtownshire—equal; 82. G. B. Mathieson, Edinburgh; Raymond Maxwell, Tasmania; J. D. Noble, Scotland; and A. H. H. Vizard, Antigua—equal; 86. E. L. Phillips, Taunton; F. J. du Toit, Cape Colony; and J. R. Whait, London—equal; 89. H. D. Coles, Bournemouth; A. W. Forrest, Shrewsbury; Murray Gillespie, Kirkcudbrightshire; Frederick J. Hare, England; John R. Higson, England; W. C. Macknight, Victoria; James Maclean, Scotland; T. E. Nuttall, England; Charles Parker, Tasmania; and R. Meeser Truter, Cape Colony—equal;

99. R. B. Campbell, Edinburgh, and Charles K. Millard, Notts—equal; 101. T. B. Barber, W. Africa; David Fraser, Wrexham; Robert Hoggan, India; and W. A. Rutherford, Yorkshire—equal; 106. George J. Awburn, England; W. Gray, Denny; and Angus V. Macgregor, Mid-Lothian—equal; 109. John M. Nicoll, Scotland, and J. Donald Pollock, Galashiels—equal; 111. A. R. Bankart, South Wales; H. B. Gladstone, London; A. W. B. Livesay, Ventnor; and W. H. Parkes, New Zealand—equal; 115. W. J. White, Scotland; 116. George Peterkin, England, and Herman Schmitz, England—equal; 118. A. Hill Buchan, Edinburgh; J. H. Glover, Ireland; W. P. Simpson, Edinburgh; and William Sproule, New South Wales—equal; 122. S. Davidson, Scotland; H. H. Khayatt, Egypt; and G. P. Sandford, England—equal; 125. Walter Tibbits, Warwick; 126. John Penny, Cockermouth, and M. Burrow Ray, Yorkshire—equal.

UNAVOIDABLY ABSENT FROM ONE EXAMINATION.

FIRST-CLASS HONOURS.—1. D. A. Welsh, M.A., B.Sc., Scotland; 2. W. Baxter Gow, Crieff.

SECOND-CLASS HONOURS.—3. J. D. Macmillan, Bradford; 4. T. J. Thomson, Edinburgh.

T. GRAINGER STEWART, M.D., *Professor.*

XI.—MEDICAL JURISPRUDENCE.

FIRST-CLASS HONOURS.—1. J. Macmillan; 2. C. Hubert Bond and Alexander Brownlie—equal; 4. Lim Boon Keng (*Medallists*); 5. J. J. Evans and Donald Macaulay—equal.

SECOND-CLASS HONOURS.—7. Daniel C. Edington; 8. R. Murray Leslie; 9. J. Lawson Dick; 10. George H. Dupont; 11. J. S. Fowler; 12. W. A. J. Alexander; 13. Robert Knox; 14. Sir Bhagvat Singh Jareja, P. O. Malabre, J. Lawson Russell, and William Young—equal; 18. L. N. Robinson; 19. Robert Hutchinson, D. G. M. Munro, and Alexander MacEwan—equal; 22. J. C. Brown, George Horne, and J. K. Watson—equal; 25. A. Scott Smith and W. Baxter Gow—equal; 27. Charles P. Stewart; 28. D. C. Watson; 29. J. Owen; 30. J. Clark Wilson; 31. Frank H. G. Hutchinson; 32. John W. W. Craig, A. H. Hopkins, A. A. O'Hara, and George B. Mathieson—equal; 36. James M'Donald and James G. Christie—equal; 38. D. Reid Crow and Frank S. Park—equal; 40. Arthur Mackintosh; 41. A. C. Turner; 42. R. E. Adamson; 43. M. W. Talbot; 44. Walter T. Fox and James M'Clew—equal; 46. George Dickson; 47. Cuthbert Thompson and J. R. Armstrong—equal.

SPECIAL COURSE IN PUBLIC HEALTH.

FIRST-CLASS HONOURS.—1. Robert Hutchison; 2. W. Baxter Gow; 3. Donald Macaulay, M.A. (*Medallists*); 4. L. N. Robinson; 5. L. Boon Keng and J. Macmillan—equal; 7. R. Murray Leslie; 8. J. Lawson Dick and J. J. Evans—equal.

SECOND-CLASS HONOURS.—10. W. C. Fraser; 11. George Johnstone; 12. P. W. Locke and J. A. Fullarton, B.A.—equal; 14. C. Hubert Bond, Alex. Brownlie, and P. O. Malabre—equal; 17. D. R. Crow and M. W. Talbot—equal; 19. L. G. F. Longbotham and R. Scheult—equal; 21. J. Lawson Russell and H. Walker—equal; 23. George Newman; 24. Alex. M'Ewan; 25. W. A. T. Alexander; 26. J. Chalmers Brown; 27. D. C. Edington; 28. Rufus E. Evans, Robert Knox, and Cuthbert Thompson—equal; 31. L. B. Beddie, J. W. Craig, G. H. Hogg, Sir Bhagvat Singh Jareja, John Owen, W. H. Parkes, C. F. Ponder, and "Epictetus"—equal; 39. Thomas Fentem, M. H. Foye, G. B. Mathieson, James Crawford Maxwell, J. D. P. M'Lachie, and Alexander Stewart—equal; 45. Charles C. Easterbrook and J. Clark Wilson—equal; 47. D. H. Burn and C. P. Stewart—equal; 49. William Young; 50. J. D. Pollock, and "The Coming Race"—equal; 52. W. B. Bell, J. O. Coker, J. R. Whait, and "Pax Vobiscum"—equal; 56. C. W. Donald and James Maclean—equal.

DOUGLAS MACLAGAN, Kt., M.D., LL.D., *Professor*.

XII.—MENTAL DISEASES.

FIRST-CLASS HONOURS.—1. D. P. Young, M.B. (*Medallist*); 2. George W. F. Macnaughton; 3. Charles W. Donald; 4. Robert Knox; 5. Fred. S. Genney; 6. C. Hubert Bond; 7. R. Murray Leslie; 8. H. C. Garth; 9. J. Livingstone.

SECOND-CLASS HONOURS.—10. W. Sibbald Campbell; 11. R. P. Dawson.

T. S. CLOUSTON, M.D., *Lecturer*.

XIII.—DISEASES OF THE EYE.

FIRST-CLASS HONOURS.—James B. Young, Edinburgh; 2. Alexander Hendry, Braemar (*Medallists*); 3. A. G. Talbot, New Zealand; 4. Harry Rainy, M.A., Glasgow; 5. Alexander Dunbar, M.B., Scotland; 6. D. P. Young, M.B., Ayrshire; 7. Robert Knox, Leith, and John A. Robertson, Berwickshire—equal; 9. Percy Wood Nicol, London.

SECOND-CLASS HONOURS.—10. H. A. Robertson, Bo'ness; 11. J. O. Coker, West Africa, and W. S. Campbell, Argyllshire—equal; 13. L. Bowman, New Zealand; 14. James S. Anderson, Peterhead; 15. R. P. Dawson, Fifeshire.

D. ARGYLL ROBERTSON, M.D., *Lecturer*.

Examination Papers for Degrees in Medicine.

PRELIMINARY EXAMINATION FOR DEGREES IN MEDICINE AND SCIENCE.

ARITHMETIC.

Tuesday, 6th October 1891.—9 to 11 o'clock.

1. Multiply £3, 17s. 9½d. by 3296.
2. Find the L.C.M. of 12, 20, 36, 54.
What is the smallest factor by which 2520 must be multiplied to make it a perfect square?

3. Find the value of $\frac{(2 + \frac{1}{3}) \div (3 + \frac{1}{4})}{(\frac{1}{2} - \frac{1}{3}) \times (4 - 3\frac{2}{3})}$.

4. Multiply 2'432719 by 4'2310692 correctly to 6 decimal places, giving an explanation of the method you employ.

5. A metre is 1'0936 of a yard, find the number of inches in a centimetre to 4 decimal places.

Express in the form of a decimal fraction the ratio of £2, 10s. to £3, 11s. 9¾d.

6. If a profit of 12½ per cent. is added to the cost price of goods, what is the cost price of an article which is sold at £1, 18s. 3d.?

7. Find the true discount on £1781, 8s. due four years hence, reckoning interest at 5 per cent.

8. Find the amount of £725 in three years, at compound interest of 5 per cent. payable annually.

9. What is the cubic content of a room whose length is 22 ft. 6 in., breadth 18 ft. 3 in., and height 10 ft.?

10. What sum of money must be invested in the 3½ per cents. at 90 to produce an annual income of £210?

Tuesday, 1st March 1892.—9 to 11 o'clock.

1. Find the cost of 425 articles at £2, 18s. 4d. each.
2. Find the L.C.M. of 8, 12, 22, 55. Resolve 114400 into its prime factors.
3. From the sum of $\frac{1}{2}$ and $\frac{1}{4}$ subtract the sum of $\frac{1}{3}$ and $\frac{1}{5}$.

Simplify $\frac{2\frac{3}{4} - 1\frac{2}{5}}{\frac{1}{3} + \frac{2}{5}} \div 1\frac{9}{13}$.

4. Multiply 39'01 by '025, and (23'045)² by (13'0134)² correctly to four decimal places,

5. A metre contains 39·371 inches ; express to three decimal places the number of metres in a mile.

6. A man sells 48 yards of cloth for £20, 16s., thereby gaining the cost of 16 yards. Find the gain per cent. and the cost price of the cloth.

7. Find the true discount on £1344, 8s. due five years hence at 4 per cent.

8. What will £800 amount to in 3 years at $3\frac{3}{4}$ per cent. per annum compound interest?

9. Divide 85 into four parts proportional to 1, $\frac{1}{4}$, $\frac{1}{9}$, $\frac{1}{16}$.

10. A man derives an income of £108 by investing £3595, 10s. in the three per cents. Find the price of the stock.

ELEMENTARY MATHEMATICS.

Tuesday, 6th October 1891.—11.30 to 1.30 o'clock.

1. Draw a straight line perpendicular to a given straight line from a point in it.

Find a point which is equidistant from three given points.

2. Define parallel straight lines.

If two straight lines are parallel, and are intersected by a third straight line ; the alternate angles are equal.

3. In a triangle ABC , acute-angled at C , the line AD is drawn perpendicular to BC , prove that

$$AB^2 = AC^2 + CB^2 - 2BC \cdot CD.$$

P is any point in the base AB of an isosceles triangle ABC ; show that $AC^2 = CP^2 + AP \cdot PB$.

4. An angle at the circumference of a circle is half the angle at the centre standing on the same arc.

5. A tangent to a circle is perpendicular to the radius drawn to its point of contact.

Draw a circle to touch a straight line at a given point, and pass through a second given point.

6. Expand in powers of x , $(1+x)^2(1-x)^3$.

Expand and arrange symmetrically

$$(a-2b+3c)^2 + (b-2c+3a)^2 + (c-2a+3b)^2.$$

7. Divide $5x^4 + 10x^3 + 10x^2 + 5x$ by $x^2 + x + 1$.

Resolve into factors $(x-5)^2 - 10(x-5) + 24$,

$$\text{and } 4a^2b^2 - (a^2 + b^2 - c^2)^2.$$

8. Simplify the fractions

$$(1) \left(\frac{x}{y} - \frac{y}{x} \right) \left(\frac{1}{x-y} - \frac{1}{x+y} \right)$$

$$(2) \frac{x-5}{(x-4)(x-3)} - \frac{2(x-4)}{(x-3)(x-5)} + \frac{x-3}{(x-5)(x-4)}.$$

9. Distinguish between an equation and an identity.

$$\text{Solve (1) } \frac{2x-3}{2} + \frac{3x-4}{3} + \frac{4x-5}{4} = 1$$

$$\text{and (2) } \frac{y}{x+1} = 3, \frac{x}{y+1} = \frac{1}{4}$$

10. What number divided by 7, 8, 9 respectively, leaves the remainders 1, 2, 3, the sum of the three quotients being 570?

Tuesday, 1st March 1892.—11.30 to 1.30 o'clock.

1. If a quadrilateral has two opposite sides equal and parallel, it is a parallelogram.

Show that the diagonals of a rhombus bisect each other at right angles.

2. In any right-angled triangle the square on the hypotenuse is equal to the sum of the squares on the sides which contain the right angle.

The edges of a box are 3, 4 and 5 inches; calculate the length of its diagonal.

3. Construct a square equal to a given rectilineal figure.

4. The opposite angles of any quadrilateral figure inscribed on a circle are together equal to two right angles.

If the inscribed figure be a hexagon, show that the sum of any three alternate angles is equal to four right angles.

5. Through a given point O within a circle (centre C), any chord PQ is drawn; show that $OP \cdot QO = CP^2 - CO^2$.

6. Expand and arrange in powers of x

$$(1+x)^2(1-x) - (1+x)(1-x)^2.$$

Expand the product $(a+b-c)(b+c-a)(c+a-b)$.

7. Find the highest common factor of

$$10x^4 - 7x^3 + x^2 \text{ and } 4x^4 - 2x^3 - 2x + 1.$$

Resolve into factors

$$(1) \ 3(x+1)^2 - 8(x+1) - 3.$$

$$(2) \ (1-xy)^2 - (x-y)^2.$$

8. Simplify the following fractions

$$\frac{(x^2-1)(x^3-1)}{(x-1)(x^4-1)}, \text{ and}$$

$$\frac{x-4}{(x-3)(x-2)} - \frac{2(x-3)}{(x-2)(x-4)} + \frac{x-2}{(x-4)(x-3)}.$$

9. Solve the equations

$$(1) \ 11(x-5) - 5(x-1) = 5\frac{1}{2}.$$

$$(2) \ \frac{2}{x} + y = 1, \frac{1}{x} + 2y = 1\frac{1}{2}.$$

10. A number consists of six digits. Its left hand digit is unity. If this digit be removed and placed on the right hand side, a new number is formed which is three times the original number. Find the numbers.

HIGHER MATHEMATICS.

Tuesday, 6th October 1891.—2 to 4 o'clock.

1. The opposite sides and angles of a parallelogram are equal, and the diagonals bisect each other.

Show that the line joining the middle points of a pair of opposite sides of a quadrilateral bisects the line joining the middle points of the diagonals.

2. Determine all the points, each of which is equidistant from three given straight lines.

3. Through a given point O within a circle any chord PQ is drawn: show that the rectangle $OP.OQ$ is constant.

For what other points within the circle has this rectangle the same value as for the given point?

4. The vertical angle A of a triangle ABC is bisected internally or externally by the straight line AX . Show that

$$BX: CX = AB: AC.$$

Find the locus of a point, the ratio of whose distances from two given points is constant.

5. If two lines are cut by three parallel planes, the intercepts on one are in the same ratio as the corresponding intercepts on the other.

6. If the tangent to a conic at any point P , intersect the directrix in the point Z , then SZ will be at right angles to SP .

Given the focus and corresponding directrix of a conic and a tangent, find the point of contact.

7. Explain the meaning of the terms *rational*, *integral*, *symmetrical*, as applied to algebraic functions.

Find the coefficients of x^2 and x^5 in the expansion of

$$(1 - x + x^2)^4 + (1 + x + x^2)^4.$$

Show that $\frac{(z-x)^3 - (x-y)^3}{z+y-2x}$ is a symmetrical integral function of

the variables x, y, z .

8. Simplify the fraction $\frac{x^7 - 7x + 6}{x^5 - 5x + 4}$.

Express as a product of two factors

$$\frac{x(y^3 - z^3)}{y - z} + \frac{y(z^3 - x^3)}{z - x} + \frac{z(x^3 - y^3)}{x - y}.$$

9. Calculate to 4 places of decimals each of the roots of the quadratic equation $16x^2 - 24x + 7 = 0$.

Solve the equation

$$x^2 + xy + x = 14, \quad y^2 + xy + y = 28.$$

10. Find the sum of a series in geometric progression.

Find the amount of an annuity of £140, payable quarterly for three years, compound interest being allowed at five per cent.

11. Define $\tan \theta$, and show that it has a period π .

If $\tan \theta = \frac{\sqrt{3}-1}{\sqrt{3}+1}$ find $\cos \theta$. Eliminate θ from the equations

$$a \tan \theta + b \sec \theta = c; \quad a \cot \theta + b \operatorname{cosec} \theta = d.$$

12. Prove the formula $\sin(A+B) = \sin A \cos B + \cos A \sin B$.

Deduce the corresponding formula for $\cos(A+B)$ and $\tan(A+B)$.

If $A+B+C=180$, show that

$$\tan A + \tan B + \tan C = \tan A \tan B \tan C.$$

Tuesday, 1st March 1892.—2 to 4 o'clock.

1. The exterior angle of any triangle is equal to the sum of the two interior and opposite angles, and the three interior angles are equal to two right angles. BO and CO bisects the angles B and C of the triangle ABC ; show that BOC is an obtuse angle.

2. The area of a trapezium is equal to the area of a rectangle whose base is half the sum of the two parallel sides, and whose altitude is the perpendicular distance between them.

3. Show that the tangent to a circle is perpendicular to the radius drawn to its point of contact.

Describe a circle of given radius to pass through a given point, and touch a given circle.

4. Describe a rectilineal figure equal to one and similar to another given rectilineal figure.

5. Through a point O are drawn three straight lines OA , OB , OC , not all in one plane; prove that any two of the three angles BOC , COA , AOB are together greater than the third.

6. The locus of the foot of the perpendicular to the tangent of a parabola from the focus is the directrix.

Draw a tangent to a parabola parallel to a given straight line.

7. Investigate directly the condition that $x^3 + px^2 + qx + r$ should be divisible by $x-a$.

Resolve into factors

$$(ay - bx)^3 - (ax - by)^3 \text{ and show} \\ \text{that } (a-b)^3 + (b-c)^3 + (c-a)^3 = 3(a-b)(b-c)(c-a).$$

8. Simplify the fraction

$$\left\{ \frac{2x}{1+2x} + \frac{1-2x}{2x} \right\} \div \left\{ \frac{2x+1}{2x} - \frac{2x}{2x-1} \right\}$$

Find the value of

$$\frac{1+x}{1+\sqrt{1+x}} + \frac{1-x}{1+\sqrt{1-x}} \text{ when } x = \frac{\sqrt{3}}{2}.$$

9. Write down the equation whose roots are the squares of the roots of $x^2 - px + q = 0$.

$$\text{Solve } \frac{a}{x+a-c} + \frac{b}{x+b-c} = 2, \text{ and}$$

$$(x+y)(x+y+1) = 56, (x-y)(x-y-1) = 12.$$

10. Show how to sum a series in geometrical progression. Find the present worth of an annuity of £100 to continue for ten years at $3\frac{1}{2}$ per cent.

$$\text{Given } \log 1.035 = .0149403.$$

$$\log 7.0892 = .850597.$$

11. Prove the formula for the expansion of $\sin(A-B)$ in sines and cosines of A and B .

Given $\sin A = \frac{3}{5}$, $\sin B = \frac{4}{5}$, find the value of $\sin(A-B)$.

If $x = 3 \cos \phi + \cos 3\phi$, $y = 3 \sin \phi - \sin 3\phi$, find an equation between x and y independent of ϕ .

12. In any plane triangle show that $a^2 - b^2 + c^2 - 2bc \cos A$; show also that

$$(a^2 - b^2) \cot C + (b^2 - c^2) \cot A + (c^2 - a^2) \cot B = 0.$$

ENGLISH.

Wednesday, 7th October 1891.—9 to 11 o'clock.

1. Take down the following passage, attending carefully to spelling and to punctuation :—

(Passage to be dictated here.)

2. Write a short Essay, neatly expressed and well punctuated, on either of the following subjects :—

(1) Ambition.

(2) Physical recreation.

3. Parse the italicized words in the following, giving the exact class in the part of speech to which each belongs :—

"The sooner," said he, "that you begin to devote yourself to your work, the better." "Well," was the rejoinder, "I have *already*, *twice* at least, *like* an obedient son, made an effort, but have failed." "No *one*," was his reply, "*save* in *very* rare cases, succeeds *all at once*; *one* must face failure *bravely*: hence, I counsel *you* to persevere." Thus the matter ended.

4. Enumerate the leading Saxon suffixes, and give their meanings. Derive *alarm*, *lesson*, *melancholy*, *method*, *summer*, *very*.

5. Discriminate between—

- (1) Allow, grant, concede.
- (2) Debate, discuss ; dispute, contend.
- (3) Bent, bias ; propensity ; tendency.
- (4) Defect, fault, flaw.

In the sentence, "Amend the following passage, according to the rules of correct composition," substitute for "amend" *emend*, and for "correct" *accurate* and *exact*, and indicate in each case the precise shade of meaning.

6. Analyze :—

- (1) Man never is, but always to be blest.
- (2) As good almost kill a man as kill a good book.
- (3) Who ever knew truth put to the worse, in a free and open encounter?

Correct : "The display of fireworks yesterday were exceeding good, but only lasted for half an hour."

7. State what you know about the life of Shakespeare. Give a sketch of any one of Shakespeare's Plays.

Explain these historical terms :—The Wars of the Roses ; The Covenanters ; The First Pitt Administration.

8. In what counties are Birmingham, Manchester, Liverpool, Belfast, Edinburgh, Glasgow, Dundee? What are the rivers in India that fall into the Bay of Bengal? Draw an outline map of Ireland, filling in as best you can.

Wednesday, 2nd March 1892.—9 to 11 o'clock.

1. Take down the following passage, attending carefully to spelling and to punctuation :—

(Passage to be dictated here.)

2. Write a brief Essay, neatly expressed and well punctuated, on Education.

3. Classify adverbs, and give examples of each class. Define a *preposition*, and give the various meanings of the preposition "of."

4. What kinds of words are characteristic of the Saxon part of the English vocabulary? Derive *alms*, *book*, *debt*, *printing*, *relate*.

5. Discriminate the following synonyms :—

- (1) Exterminate, eradicate ; efface.
- (2) Delusion, illusion, hallucination.
- (3) Zeal, enthusiasm, fanaticism.
- (4) Adhere, cling, cleave ; cohere.

Take the sentence, "What we call a new fashion is *usually* but the *revival* of some ancient mode," and substitute for each of the italicized words the various synonyms, and point out the precise difference in meaning in every case.

6. What is wrong in the English of each of the following sentences, and why?—

- (1) He is presently away from home, but we expect him to return back on Friday first.
- (2) James was as bad off, if not more so, than John.
- (3) I only came here yesterday, but already have seen no end of sights.

Analyze:—"But not alone the bitter tear Had filial grief supplied."

7. Enumerate the counties in Scotland. Take any four large towns in England, and state (1) their exact geographical position; (2) the rivers on which they are situated; (3) the industry for which they are famous. Where are Benares, Madras, Calcutta, and Bombay?

8. Give some account of Sir Walter Scott and his writings.

What is meant in British History by *The Union of the Kingdoms* and *The Union of the Crowns*? State the leading political events in the reign of George III.

NATURAL PHILOSOPHY.

Wednesday, 7th October 1891.—11.30 to 1.30 o'clock.

1. Explain how to measure the energy (1) of a body in motion, (2) of a body at rest.

2. Distinguish between a solid and a fluid. What is meant by *viscosity* as a property of a fluid, and to what is it due?

3. Explain why the velocity of sound in a gas is the same under any pressure. Why is it increased by rise of temperature?

4. Define latent heat of fusion.

A block of ice weighing 10 lbs., at 0°C ., is placed in 20 lbs. of water at 60°C . When the whole of the ice is melted, the temperature of the water is reduced to $13^{\circ}.6\text{C}$. Assuming that there is no loss of heat, determine the latent heat of fusion of ice.

3. Explain the origin of "trade winds," and account for the directions in which they blow.

6. Explain, and illustrate by a diagram (showing object, image, and course of the rays), how a double convex lens may be used to obtain a magnified image of an object. When is the image real, and when virtual?

7. Describe the construction and use of a Leyden jar. Explain, in connection with it, the terms *charge*, *capacity*, and *potential*.

8. Explain the fundamental phenomenon of electro-magnetism. How is the principle applied in the Galvanometer, and for what purpose?

Wednesday, 2nd March 1892.—11.30 to 1.30 o'clock.

1. Distinguish between kinetic and potential energy. A 10-ton hammer falls from a height of 6 feet, on to a piece of metal, which is compressed $\frac{1}{4}$ -inch by the blow. Find the mean thrust exerted on the metal during the blow.

2. Describe some phenomena which are due to the surface tension of liquids.

3. A person looks at an object through a double-concave lens of one foot focal length, the object being five feet beyond the lens. Draw a figure showing the path of the rays by which he sees the image, and determine its position.
4. Describe and distinguish the different modes of transference of heat.
5. If an incandescent body give a luminous spectrum with dark lines, what inference can be drawn as to its constitution?
6. Distinguish between a sound and a musical note. In an organ-pipe, open at the top, investigate the wave-length of the primary note.
7. Explain the use of the gold leaf electroscope. What will happen if an uncharged conductor is made to approach slowly towards the plate of a charged electroscope? Give a reason for your answer.
8. Define the terms *Ohm*, *volt*, *ampere*, and explain how they are connected together.

MECHANICS.

Wednesday, 7th October 1891.—2 to 4 o'clock.

1. Explain how a velocity may be represented by a straight line. Give the rule for compounding velocities represented by any given lines. Find the resultant velocity of a point which has, simultaneously, velocities of three northwards, four eastwards, and five vertically upwards.
2. Define uniform velocity and uniform acceleration.
With what velocity must a stone be projected vertically upwards, so as to return to the ground after six seconds? How high will it rise?
3. Give Newton's second and third Laws of Motion, and explain the difference between the classes of problems with which they respectively deal.
4. Distinguish between *mass* and *weight*.
Why is a pound weight a variable force? Compare it with any scientific unit of force.
5. Define Work and Power.
Determine the resistance of a steamer in tons weight, when 8000 horse-power is required to drive it at twenty miles an hour.
6. Enumerate the different kinds of Lever. In any one of them show that the work done by the power is equal to the work done against the weight.
7. Define density and specific gravity.
The specific gravity of cast-iron referred to water is 7. Find the density of cast-iron in pounds to the cubic foot, assuming that a cubic foot of water weighs 62·5 lbs.
8. State Boyle's Law.
A cylindrical jar is immersed, mouth downwards, in water. Assuming the water barometer to stand at 33 feet, find at what depth the jar will be two-thirds full of water.

Wednesday, 2nd March 1892.—2 to 4 o'clock.

1. Define *speed*, *velocity*, and *average speed*. A train is moving at the rate of twenty miles an hour, and its speed is uniformly diminishing at the rate of 88 feet per minute. Find its average speed during ten minutes.

2. How far has a body fallen from rest under the action of gravity when it has acquired a speed of 100 feet per second?

3. State Newton's second law of Motion, and explain how we derive from it a unit of force. Compare this unit with the gravitation unit.

4. Define the terms *foot-pound* and *horse-power*. What is the horse-power of an engine which raises 21 cwt. from a depth of 150 yards in three minutes? [1 horse-power = 550 in the usual units.]

5. Explain the principle of the lever, and show that, when there is no acceleration, the work done by the power applied to it is equal to the work done against the weight.

6. In an arrangement of pulleys there are three different strings, each of which is attached to the weight. Find the weight lifted by a pull at the fall of 25 lbs.

7. Define *specific gravity*.

What is the specific gravity of a mass which floats with $\frac{1}{6}$ th of its volume out of water?

8. Describe briefly the action of the force-pump.

If the plunger of a force-pump has a cross section of 4 square inches, and works 60 feet below a cistern, with what pressure must it be forced down in order to raise water to the cistern? [1 cubic foot of water = 62.5 lbs.]

LATIN.

Thursday, 8th October 1891.—9 to 11 o'clock.

I. Translate :—

Quamobrem id primum videamus, si placet, quatenus amor in amicitia progredi *debeat*. Numne, si Coriolanus habuit amicos, ferre contra patriam arma illi cum Coriolano debuerunt? num Viscellinum amici regnum *appetentem*, num Sp. Maelium debuerunt iuvare? Ti quidem Gracchum rem publicam vexantem a Q. Tuberone aequalibusque amicis derelictum videbamus. At C. Blossius Cumanus, hospes familiae vestrae, Scaevola, cum ad me, quod aderam Laenati et Rupilio *consulibus* in consilio, *deprecatum* venisset, hanc ut sibi *ignoscerem* causam afferebat, quod *tanti* Ti. Gracchum fecisset, ut *quidquid* ille *vellet*, sibi faciendum putaret. Tum ego: "Etiamne, si te in Capitolium faces ferre vellet?" "Nunquam," inquit, "voluisset id quidem: sed si *voluisset*, *paruissem*." Videtis quam nefaria vox!

II. 1. In the above passage parse the words italicised, accounting for the *mood* of the verbs, and for the *case* of the other words.

2. Write out the pres. indic. act. of *nolo*, the pres. indic. pass. of *ero*, and the fut. infin. of *progredior*.

III. Translate :—

De amicitia omnes ad unum idem sentiunt, et ii qui ad rem publicam se contulerunt, et ii qui rerum cognitione doctrinaque delectantur, et ii qui suum negotium gerunt otiosi, postremo ii qui se totos tradiderunt voluptatibus, sine amicitia vitam esse nullam, si modo velint aliqua ex parte liberaliter vivere. Serpit enim nescio quo modo per omnium vitas amicitia, nec ullam aetatis degendae rationem patitur esse expertem sui. Quin etiam si quis asperitate ea est et immanitate naturae, congressus ut hominum fugiat atque oderit, qualem fuisse Athenis Timonem nescio quem accepimus; tamen is pati non possit, ut non anquirat aliquem, apud quem evomat virus acerbitalis suae.

Decline in the singular *totus, aliquis, sui, congressus, virus*.

IV. Translate :—

Accidit etiam repentinum incommodum biduo, quo haec gesta sunt. Tanta enim tempestas cooritur, ut numquam illis locis maiores aquas fuisse constaret. Tum autem ex omnibus montibus nix profluit, ac summas ripas fluminis superavit; pontesque ambos, quos C. Fabius fecerat, uno die interrumpit. Quae res magnas difficultates exercitui Caesaris attulit. Castra enim, ut supra demonstratum est, quum essent inter flumina duo, Sicorim et Cingam, spatio millium XXX, neutrum horum transiri poterat; necessarioque omnes his angustiis continebantur.

V. Translate into Latin :—

For nearly three hours the fight went on, and everywhere keenly (*acriter*). Around the consul, however, the battle was keener and more fierce (*infestus*). He was followed by the flower (*robor*) of the troops, and was himself active in carrying (*impigre ferebat*) help, on whatever side he perceived (pluperf. indic.) that his men were being pressed. Conspicuous (*insignis*) by his armour, he continued attacking the enemy with the utmost force, and defending his own men.

Thursday, 3rd March 1891.—9 to 11 o'clock.

I. Translate :—

Plurimum in amicitia amicorum bene suadentium *valeat* auctoritas, eaque adhibeatur ad monendum non modo aperte, sed etiam acriter, si res postulabit; et *adhibere* pareatur. •Nam quibusdam, quos audio sapientes habitos in Graecia, placuisse opinor mirabilia quaedam (sed nihil est, quod illi non *persequantur* argutius), partim fugiendas esse nimias amicitias, ne necesse sit unum sollicitum esse pro pluribus; satis superque esse suarum *cuique* rerum; alienis nimis implicari molestum esse: commodissimum esse, quam laxissimas habenas habere amicitiae: quas vel *adducas*, quum *velis*, vel remittas. Caput enim esse ad beate vivendum securitatem; *qua* frui non possit animus, si tamquam parturiat unus pro pluribus. Alios autem dicere aiunt multo etiam inhumanius (quem locum breviter perstrinxi paullo ante), praesidii adiumentique causa non benevolentiae neque caritatis, amicitias esse expetendas. Itaque ut quisque minimum firmitatis *habeat* minimumque *virium*, ita amicitias appetere maxime,

II. 1. In the above passage parse the words italicised, accounting for the *mood* of the verbs, and for the *case* of the other words.

2. Give the chief parts of the verbs *suadentium*, *pareatur*, *opinor*, *fugiendas*, *vivendum*, *frui*, *perstrinxi*, *expetendas*; and write out the pres. indic. and subj. of *aiō*.

III. Translate:—

Quod si etiam possis quidvis deferre ad alterum, videndum est tamen quid ille possit sustinere. Omnino amicitiae, corroboratis iam confirmatisque et ingenii et aetatibus, iudicandae sunt: nec, si qui ineunte aetate venandi aut pilae studiosi fuerint, eos habere necessarios oportet, quos tum eodem studio praeditos dilexerunt. Isto enim modo nutrices et paedagogi iure vetustatis plurimum benevolentiae postulabunt: qui negligendi quidem non sunt, sed alio quodam modo. Aliter amicitiae stabiles permanere non possunt.

Decline in the singular—*quidvis*, *alterum*, *ineunte*, *isto*, *iure*.

IV. Translate:—

Ex his omnibus longe sunt humanissimi, qui Cantium incolunt: quae regio est maritima omnis; neque multum a Gallica differunt consuetudine. Interiores plerique frumentum non serunt; sed lacte et carne vivunt, pellibusque sunt vestiti. Omnes vero se Britanni vitro inficiunt, quod caeruleum efficit colorem. Atque hoc horridiore sunt in pugna adspectu: capilloque sunt promisso, atque omni parte corporis rasa, praeter caput et labrum superius. Uxores habent deni duodenique inter se communes, et maxime fratres cum fratribus, parentesque cum liberis: sed, si qui sunt ex his nati, eorum habentur liberi, quo primum virgo quaeque deducta est.

V. Translate into Latin:—

On that day Scipio, having ordered C. Laelius with his naval allies to guard (*custodire*) the city, himself led back the legions into camp. The soldiers had, on one and the same day, fought a pitched battle (*acie dimicare*), had encountered (*adire*) the utmost toil and danger in taking the city, and when it was taken, had joined battle on unfavourable (*iniquus*) ground with those who had taken refuge in the citadel. He ordered them to rest (*curare*) their bodies worn out with all the labours (*opus*) of the war. He applauded (*conlaudo*) the valour of the soldiers, which neither the onset (*eruptio*) of the enemy nor the height of the walls had been able to check (*deterre*).

LOGIC.

Thursday, 8th October 1891.—11.30 to 1.30 o'clock.

[The Candidate may take either Paper A or Paper B, but must confine himself to the Paper he has chosen.]

A

1. Define a *term*. What is meant by the *distribution* of terms? Give examples. State the rules for the distribution of common terms.

2. Give, where possible, the contrary, the contradictory, the converse, and the permutation of each of the following propositions :—

- (1) Nature abhors a vacuum.
- (2) Crabbed age and youth cannot live together.
- (3) Great is Diana of the Ephesians.
- (4) Unasked advice is seldom acceptable.

3. How do you distinguish between the legitimate and the abusive use of words? When is the introduction of a new term into the language philosophically imperative? Exemplify.

4. What is meant by Inductive definition and Deductive definition respectively? In what different ways do you test a Perfect definition? Give examples.

5. State clearly the inductive Method of Difference, and give at least two examples of the method. What is meant by an *imperfect* induction?

6. What are the conditions of a Scientific Hypothesis? Apply them to test the Darwinian hypothesis of Evolution.

B

1. Give some account of Locke's doctrine of Matter. Compare it with Berkeley's teaching—both earlier and later.

2. State and examine Hume's doctrine of the Ego. What is meant by Hume's agnosticism?

3. What is Berkeley's account of the nature and formation of Abstract Ideas? What value does he attach to abstract ideas in philosophy? Is his estimate just?

4. In what various ways, according to Berkeley, are words responsible for the doctrine of abstract ideas?

5. How can it be maintained that "the sight of things is really foresight"? Explain fully.

6. How may we be said to know God's existence with even a greater degree of assurance than we do that of a fellow-man?

Thursday, 3rd March 1892.—11.30 to 1.30 o'clock.

[The Candidate may take either Paper A or Paper B, but must confine himself to the Paper he has chosen.]

A

1. Give *three* examples at least of each of the two principles according to which words change their meanings. How do you determine when a word is *abusively* employed? Exemplify in the case of "Nature."

2. What is meant by Definition? Indicate precisely (1) the nature, (2) the utility, (3) the defects of definition *per genus et differentiam*. What is the particular value of Definition by Negation?

3. What is meant (1) by *vagueness*, (2) by *redundancy*, (3) by *tautology* in definition? State the rules to be observed in definition by *Analysis*. In what cases do these fail?

4. Classify Deductive Fallacies, and give an example of each class.
 5. What are the tests of a Scientific Hypothesis? Apply them to a concrete example.
- State and exemplify the inductive Method of Difference.

B

1. State the leading features of Descartes' philosophy, and trace the historical development of Cartesianism down to Spinoza.
2. Give some account of Locke's views regarding the three great Ontological certainties.
3. In what way did Berkeley change the question with which philosophers had, up to his time, been mainly exercised? State clearly his position.
4. How do ideas, according to Berkeley, become general? In what way are words responsible for the doctrine of Abstract Ideas?
5. What is the kind of *proof* that the philosopher has to offer of the existence of God? How may we be said to know God's existence with even a greater degree of certainty than we do that of a fellow-man?

MORAL PHILOSOPHY.

Thursday, 3rd March 1892.—2 to 4 o'clock.

1. Define Terror, and exemplify its effects (physical and mental) in any one striking instance.
2. What is the relation between Benevolence and Gratitude? What are the proper objects of Admiration; and how is Admiration allied to Esteem?
3. Analyze the Emotion of Power, on its physical and on its mental side; and enumerate its leading species.
4. Enumerate and examine the objections to Ethics, founded on the fact that the Method of Ethics is Introspection.
5. Define Moral Judgment. How do we attain a knowledge of moral distinctions? How do moral sentiments stand related to moral judgments?
6. What is the exact place of Socrates in the History of Ethics? Explain his doctrine that "Knowledge is Virtue." Give some account of the teaching of Hobbes.

GREEK.

Friday, 9th October 1891.—9 to 11 o'clock.

I. Translate:—

(1.) Οὐκοῦν, ἔφη ὁ Σωκράτης, εἰ γε ταῦτα τοιαῦτά ἐστι, καλῶς ἂν ἔχοι ἐξετάζειν τινὰ ἐαυτὸν πόσου ἄρα τυγχάνει τοῖς φίλοις ἄξιος ὢν καὶ πειρᾶσθαι ὥς πλείστου ἄξιος εἶναι, ἵνα ἡττον αὐτὸν οἱ φίλοι προδιδῶσιν. ἐγὼ γάρ τοι, ἔφη, πολλάκις ἀκούων τοῦ μὲν ὅτι προύδωκεν αὐτὸν φίλος ἀνὴρ, τοῦ δ' ὅτι μὲν ἂν ἀνθ' ἐαυτοῦ μᾶλλον εἴλετο ἀνὴρ ὃν ᾤετο φίλον εἶναι, τὰ τοιαῦτα πάντα

σκοπῶ μὴ ὥσπερ, ὅταν τις οἰκέτην πονηρὸν πωλῇ, ἀποδίδοται τοῦ εὐρόντος, οὕτω καὶ τὸν πονηρὸν φίλον, ὅταν ἐξῇ τὸ πλεόν τῆς ἀξίας λαβεῖν, ἐπαγωγὸν ἢ ἀποδίδοσθαι.

(2.) Ἰότερα δ' ἂν, ἔφη ὁ Σωκράτης, ὦ Κριτόβουλε, δοκῶ σοι μᾶλλον ὠφελεῖν σε τὰ ψευδῇ ἐπαινῶν ἢ πείθων πειρᾶσθαι σε ἀγαθὸν ἄνδρα γενέσθαι; εἰ δὲ μὴ φανερόν οὕτω σοι, ἐκ τῶνδε σκέψαι· εἰ γάρ σε βουλόμενος φίλον ποιῆσαι ναυκλήρῳ ψευδόμενος ἐπαινοῖν, φάσκων ἀγαθὸν εἶναι κυβερνήτην, ὁ δέ μοι πεισθεὶς ἐπιτρέψειέ σοι τὴν ναῦν μὴ ἐπισταμένῳ κυβερνᾶν, ἔχεις τινὰ ἐλπίδα μὴ ἂν σαυτὸν τε καὶ τὴν ναῦν ἀπολέσαι;

II. In the first of the above passages parse πλείστου—προδιδῶσιν—ἔφη—προῦδωκεν—εἴλετο—ῥετο—πωλῇ—εὐρόντος—ἐξῇ—ἀποδίδοσθαι.

III. Decline κυβερνήτης and πονηρός in the singular, ἀνὴρ and τοιοῦτος in the plural, and ναῦς throughout.

IV. Give the other degrees of comparison of καλῶς—ἄξιος—πλείστος—ἦττον—φίλος—ψευδής—ἀγαθός.

V. Write out fully the imperfect indicative active of δίδωμι, the 1st aorist indicative middle of γράφω, and the present indicative middle of πείρω.

VI. Translate into Greek :—

(1.) Since these things are so, we ought to be of good courage (θαρρεῖν). (2.) I shall try to teach you something. (3.) He left (καταλείπειν) them a good hope. (4.) Do not fear (φοβεῖσθαι) death: fear dishonour (αἰσχύνῃ). (5.) He said that he was unworthy of so great honour (τιμῇ).

Friday, 4th March 1892.—9 to 11 o'clock.

I. Translate :—

(1) ἀθάνατος δὲ οὖσα ἐκ θεῶν μὲν ἀπέρριψαι, ὑπὸ δὲ ἀνθρώπων ἀγαθῶν ἀτιμάζει· τοῦ δὲ πάντων ἡδίστου ἀκούσματος, ἐπαίνου σεαυτῆς, ἀνήκοος εἶ, καὶ τοῦ πάντων ἡδίστου θεάματος ἀθέατος· οὐδὲν γὰρ πώποτε σεαυτῆς ἔργον καλὸν τεθέασαι. τίς δ' ἂν σοι λεγούσῃ τι πιστεύσειε; τίς δ' ἂν δεομένη τινὸς ἐπαρκέσειεν; ἢ τίς ἂν εὖ φρονῶν τοῦ σοῦ θιάσου τολμήσειεν εἶναι; οἱ νέοι μὲν ὄντες τοῖς σώμασιν ἀδύνατοί εἰσι, πρεσβύτεροι δὲ γενόμενοι ταῖς ψυχαῖς ἀνότητοι, ἀπόνως μὲν λιπαροὶ διὰ νεότητος φερόμενοι, ἐπιπόνως δὲ αὐχμηροὶ διὰ γήρως περῶντες, τοῖς μὲν πεπραγμένοις αἰσχυρόμενοι, τοῖς δὲ πραττομένοις βαρυνόμενοι, τὰ μὲν ἡδέα ἐν τῇ νεότητι διαδραμόντες, τὰ δὲ χαλεπὰ εἰς τὸ γήρας ἀποθέμενοι.

(2) καὶ ὁ Σωκράτης ἔφη, Εἴτα οὐ λέγεις αὐταῖς τὸν τοῦ κυνὸς λόγον; φασὶ γάρ, ὅτε φωνήεντα ἦν τὰ ζῶα, τὴν οἶν πρὸς τὸν δεσπότην εἰπεῖν, Θαυμαστὸν ποιεῖς, ὃς ἡμῖν μὲν ταῖς καὶ ἑριά σοι καὶ ἄρνας καὶ τυρὸν παρεχούσαις οὐδὲν δίδως ὅ, τι ἂν μὴ ἐκ τῆς γῆς λάβωμεν, τῷ δὲ κυνὶ, ὅς οὐδὲν τοιοῦτόν σοι παρέχει, μεταδίδως οὐπὲρ αὐτὸς ἔχεις σίτου. τὸν κύνα οἶν ἀκούσαντα εἰπεῖν, Ναὶ μὰ Δί' ἐγὼ γάρ εἰμι ὁ καὶ ὑμᾶς αὐτὰς σώζων ὥστε μήτε ὑπ' ἀνθρώπων κλέπτεσθαι μήτε ὑπὸ λύκων ἀρπάζεσθαι, ἐπεὶ ὑμεῖς γε, εἰ μὴ ἐγὼ προφυλάττοιμι ὑμᾶς, οὐδ' ἂν νέμεσθαι δύνασθε, φοβούμεναι μὴ ἀπόλησθε. οὕτω δὴ λέγεται καὶ τὰ προβατὰ συγχωρῆσαι τὸν κύνα προτιμάσθαι.

II. In the above pieces parse fully :—ἀπέρριψαι—ἡδίστου—τεθέασαι—ἐπαρκέσειεν—σώμασιν—περὼντες—ἀποθέμενοι—παρεχούσαις—οὐπερ—συγχωρήσαι.

III. Decline λιπαρός in the singular; and δεσπότης, ἀρνός, κύων throughout.

IV. Write out fully the pres. optative act. of περῶ, the pres. indic. mid. of δίδωμι, the 2 aor. imperat. act. of τίθημι, the 1 aor. indic. pass. and perfect indic. pass. of πράσσω.

V. Translate into Greek :—

Not many are worthy of greater honour (τιμή).

They die (ἀποθνῆσκω) first, whom the gods most love (ἀγαπάω).

He said that he would come within three days.

If I had seen him, I should have told him all.

He said that, if it so should happen, we should all be in the greatest danger.

FRENCH.

Friday, 9th October 1891.—11.30 to 1.30 o'clock.

N.B.—*Candidates are reminded of the regulation that mere translation into English is not sufficient, but there must be translation of an English passage into each of the languages taken up.*

I. Translate into English :—

(a) Hoche se trouvait, dans l'Ouest, au milieu de la chouannerie, dans cette guerre de haies, de chemins creux et de surprises nocturnes, faite par un ennemi le plus souvent invisible : il étouffait sur ce théâtre si triste et si étroit pour un homme d'un si grand cœur et d'un si beau génie. Il se faisait violence au dehors, mais il s'épanchait dans sa correspondance intime : on l'y voit tressaillir d'allégresse au bruit des succès de son ancienne armée de la Moselle, devenue armée de Sambret-Meuse. "Je désire, écrivait-il, qu'on s'y souvienne qu'autrefois j'y servais aussi." En apprenant la grande victoire de Jourdan à Fleurus, il écrit avec une modestie charmante : "Si je ne craignais d'être importun, j'adresserais quelques lignes à Jourdan ; mais l'écoulier a-t-il en ce moment le droit de distraire le maître ? Continuez, braves et anciens amis, à soutenir votre nom : lorsque la postérité fouillera votre correspondance, peut-être une lettre de moi, qui se trouvera là par hasard, témoignera de votre amitié et me fera échapper au naufrage de l'oubli."

(b) Peu de jours après, c'est à sa femme qu'il donne d'intelligents conseils pour elle-même : il s'occupe de compléter son éducation, comme il s'occupera plus tard de celle de son enfant à naître. Il dirige ses lectures, il lui enseigne à arrêter son attention et sa réflexion sur ce qu'elle lit, et la familiarité du langage ajoute à sa précision : "Tu ne dois pas, dit-il, être un perroquet qui n'entend rien à ce qu'il répète : lis

peu et analyse beaucoup ; dis beaucoup de choses en peu de mots : tu le vois, je te traite en ami : je crois en avoir le droit, certain que je sois l'auteur dont tu retiens le plus volontiers les préceptes." Sa tendresse s'épanche plus loin avec effusion, et l'enjouement se mêle sous sa plume à la gravité plus que sérieuse d'un homme qui a trouvé des mécomptes dans la gloire, et des épines sous les lauriers.

II. Translate into French :—

Lazare Hoche was born at Versailles on the twenty-fourth of June 1768. His father was an old soldier who occupied a humble post at the king's court. His mother died two years after his birth ; and an aunt of his who kept a green-grocer's shop in the suburbs, and had a great affection for the child, took charge of his first education. Young Hoche early distinguished himself in the school games, and, by his good manners and liveliness, gained the heart of his uncle, the Abbé Merlière. The latter gave him some lessons, and taught him the elements of Latin. A book of travel which he had read awakened in the youth a taste for adventure ; and, at the age of sixteen, he resolved to engage in the colonial troops ; but, being deceived by a recruiting (*recruteur*) serjeant, he found himself enrolled, without knowing it, in the French Guards. He soon made rapid progress in the esteem of his officers and fellow-soldiers (say, *comrades*), who could not help liking him for his kindly, upright, and generous nature (say, *character*).

III. 1. Give the plural and meaning of *son neveu, ce clou, votre genou, tout ce détail, ton bel oiseau, il mangea, il va*.

2. Give the feminine and meaning of *ce gentil garçon, mon cher cousin, monsieur le duc, son époux affreux, ce fut lui*.

3. Give the adverb and meaning of *vif, fréquent, lent, franc, fou, furieux, doux, gentil, meilleur, pire*.

4. Write the French words for :—16, 21, 73, 85 ; 1st, 93d, 102d ; 1891 ; a quarter to three o'clock.

5. (a) 3d singular present, past definite, past indefinite, and future of *appeler, acheter, voir*.

(b) 2d plural of the same tenses of *vouloir, faire, écrire, devoir, se fâcher*.

6. Mention three dramatic writers and three novelists, with the titles of some of their works.

Friday, 4th March 1892.—11.30 to 1.30 o'clock.

I. Translate into English :—

(a) La popularité de Hoche dans les armées de l'Est faisait ombrage au Comité ; il s'irritait de la fierté, de la rudesse même de son langage, et il résolut de punir ce jeune et superbe vainqueur : mais il n'osa le frapper au milieu de l'armée dont il était l'idole, et avant de l'abattre, il l'abreuva de dégoûts, sans jamais lasser ni sa fidélité, ni sa constance. Il le laissa, sans instructions, sans direction, à la tête de l'armée de la Moselle, et quelquefois il lui imposait des ordres rigoureux dont l'exécution était impossible. Hoche réclamait, ne recevait point de réponse,

et s'il prenait l'initiative, ses actes les plus simples étaient interprétés contre lui. Ayant un jour secouru un bataillon dans la détresse, privé d'habits et de chaussures, il fut averti qu'il empiétait sur l'administration militaire et que sa responsabilité était gravement compromise. Le Comité lui cachait avec soin ses vues à son égard ; mais Hoche se sentait menacé par un pouvoir muet et invisible : l'épée de Damoclès était sur sa tête.

(b) Hoche eut sur Bertrand du Guesclin le grand avantage de naître à une époque de civilisation plus avancée, et comprit la supériorité que donne la culture des lettres et les jouissances qu'elle procure. Bertrand ne savait pas lire et ne s'en mit jamais en peine : Hoche, au contraire, regretta toujours de n'avoir reçu dans son enfance qu'une instruction trop insuffisante, et il fit tout ce qui était en son pouvoir pour en combler les lacunes. Il lisait, il étudiait dans les camps : les auteurs anciens et surtout les historiens de la Grèce et de Rome eurent pour lui un puissant attrait : il trouvait dans leurs écrits une sève de vertu républicaine dont son âme intègre et fière se nourrissait avec délices, et il se sentait puissamment attiré par ces figures héroïques, par ces grands chefs qui, en déposant leur glorieuse épée, s'honoraient de conduire la charrue.

II. Translate into French :—

My master and his friend went out for a walk, and I accompanied them. We stopped at the University to look at some notices of books fixed up on the gate. Several persons amused themselves by reading them, and I perceived a little man among them who gave his opinion of all the different works thus advertised. He was listened to with great attention, but seemed to be vain and positive, as little men usually are. "That new translation of Horace," said he, "which you see praised in such large letters, is in great esteem among the students, who have already consumed four editions of it, and yet there is not one man of taste who has purchased as much as a single copy." His judgment was not more favourable to the other books, and I should not have been sorry to have heard him to the end, but I was obliged to follow Don Lewis, who, being as little pleased with the man's discourse as interested in the books he censured, turned his back both on him and the University.

LE SAGE.

III. 1. Give plural and meaning of *notre amiral, tout ce château, son vieil ami, celui-là, quelqu'un, c'est lui, qu'il eût.*

2. Give feminine plural and meaning of *leur fils, quel beau prince, ce fou, son meilleur lion, lui-même, mon cher monsieur, à l'époux.*

3. Distinguish between *dessus—dessous ; sur—sur ; avant—devant ; plutôt—plus tôt ; pour—pour ; il a froid—il fait froid ; mes petits enfants—mes petits-enfants.*

4. Give the French words for Francis I., Charles II., Henry III., on the first of August, on the 21st of July, at half-past three o'clock, 80 officers, 300 horses, and 380 men.

5. Give (a) the third singular and plural, present, past definite, past indefinite, and future of *faire, savoir, aller, envoyer*.
 (b) the second singular and plural imperative, positive and negative, of *se lever* and *s'en aller*.
6. Give brief notices of any three of the following writers:—Fénelon, Lamartine, V. Hugo, Balzac, Racine.

GERMAN.

Friday, 9th October 1891.—2 to 4 o'clock.

N.B.—Candidates are reminded of the regulation that mere translation into English is not sufficient, but there must be translation of an English passage into each of the languages taken up.

I. Translate into English:—

(a) Mit dem Schlage zwölf ging er zur Tafel. Seine Tischgesellschaften sind berühmt. Er wählte dazu nicht bloß die geistreichsten und gebildetsten unter seinen Offizieren, sondern erweiterte diesen Zirkel auch durch mehrere ausgezeichnete Humoristen und Gelehrte, besonders aus Frankreich, die er an seinen Hof zog. Am liebsten führte er die Unterhaltung selbst. Er sprach schnell und fließend, und sein ungeheures Gedächtnis, seine Erfahrung, seine Belesenheit und sein Witz ließen es nie an Stoff fehlen. Wer nicht geläufig französisch sprach, hörte bloß zu; von andern hörte er gern Einwendungen, und er haßte diejenigen Zuhörer, die nur alles trocken bejahten. Nach der Tafel blies er wieder eine halbe Stunde auf der Flöte; dann unterzeichnete er die unterdessen im Kabinett abgefaßten Briefe, trank Kaffee und besah seine Anlagen. Die Stunden von vier bis sechs waren gewöhnlich seinen schriftstellerischen Arbeiten gewidmet. Von sechs bis sieben dauerte das Konzert, und nach diesem ging die Abendmahlzeit an, die in so geistreicher Gesellschaft oft bis Mitternacht währte, und in welcher ein witziger Einfall den andern jagte.

(b) Abschied, Abschied, böse Stunde!

In der Erkerstube schnürte
 Werner seine sieben Sachen,
 Schnürt das leichte Reisebündel;
 Grüßt zum letztenmal des Stübchens
 Weiße Wände, 's war ihm schier als
 Wären's alte, gute Freunde.

Nur bei ihnen nahm er Abschied,
 Margaretha's Augen hätt' er
 Nimmermehr begegnen mögen.
 Drauf zum Schloßhof stieg er nieder,
 Sattelte sein treues Rößlein,—
 Hufschlag dann; es ritt ein trüber
 Reiter aus des Schlosses Frieden.

II. Translate into German :—

A rich miser (*Geizhals*) lost a purse of gold, and promised to the lucky finder a reward of a hundred ducats. A poor man brought the purse. The miser took it and counted the money. "I see," he said, "you have already taken your reward, for the purse contained a thousand ducats, and there are only nine hundred in it." The honest man protested (*betheuern*) his innocence, but in vain. They went to law (*vor Gericht*), and the judge decided (*entscheiden*) as follows :— "If both of you (say, *you both*) speak the truth, this cannot be the purse which one of you has lost. The finder will therefore keep it till its rightful (*rechtmäßig*) owner comes and claims it; and the other must wait till some one brings him his purse of a thousand ducats."

III. 1. Give the nominative and genitive singular, and nominative plural—with the definite article—of the German for *any ten* of the following words : *sword, beard, nose, wood, eagle, maid, lady, queen, hair, hare, bear, war, teacher, pupil, boat, bridge*.

2. Decline (singular and plural) the German for—*my good friend*, and the third personal pronoun.

3. Give the German words for :—57, 98; 1st, 12th, 101st; $1\frac{1}{2}$, $2\frac{1}{2}$, $3\frac{1}{3}$; *once*; *a quarter past three o'clock*.

4. Give the 2d singular of the present, imperfect, and perfect indicative active, and of the imperative of *irrechen, kommen, sehen, thun, bringen, finden, riechen, behalten, ablegen, verstehen*.

5. Show by examples what cases are governed by the prepositions *an, für, bei, außer, ohne*.

6. Give the names of three dramatic and three lyric writers, and mention some of their works.

Friday, 4th March 1892.—2 to 4 o'clock.

I. Translate into English :—

(a) Als er nun zu der armen Frau ins Stübchen trat, meinte sie, es sei der Dokter, und erzählte ihm ihren Umstand, und wie sie noch so arm dabei sei und sich nicht erlegen könne. Der Kaiser erwiderte : „Er will ich Euch denn ein Mezert verschreiben :“ und sie sagte ihm, wo des Knaben Schreibzeug wäre. Als schrieb er das Mezert und belehrte die Frau, in welche Apotheke sie es schicken müsse, wenn das Kind heimkomme, und legte es auf den Tisch. Als er aber kaum eine Minute fort war, kam der rechte Dokter. Die Frau wunderte sich nicht wenig, als sie hörte, er sei auch ein Dokter, und entschuldigte sich, es sei schon einer da gewesen und habe ihr etwas verordnet. Als aber der Arzt das Mezert in die Hand nahm, um zu sehen, wer bei ihr gewesen sei, und was für einen Trank oder was für Pillen er ihr verschrieben habe, erstaunte er nicht wenig und sagte : „Frau, Ihr seid einem guten Arzte in die Hände gefallen; denn er hat

Euch fünfundzwanzig Geldstücke verordnet; und darunter steht Joseph, wenn Ihr ihn kennt. Eine solche Arznei hätte ich Euch nicht verschreiben können."

- (b) Das seh'n die beiden droben—dem Fremden sinkt die Hand;
Hans aber zeigt hinunter aufs liebe Vaterland:
„Für das hab' ich gestritten, für das schlug ich ihn tot."
Der Fremde sieht hinunter, sieht Hansen ins Gesicht,
Er will den Arm erheben, den Arm erhebt er nicht:
„Und hast du ihn erschlagen, so war's im rechten Streit;
Und willst du mir verzeihen, komm, Hans, ich bin bereit!"
- (c) Dem Gott will rechte Gunst erweisen,
Den schickt er in die weite Welt,
Dem will er seine Wunder weisen
In Berg und Wald und Strom und Feld.

II. Translate into German:—

A farmer's son who was only seven years old was exceedingly clever. All the people in the village admired him, and talked much about him. The clergyman of the place heard about the wonderful child, and was curious to see him. One day he met the boy's father in the street, and said to him, "I have heard so much of your clever son, and should like very much to see him. You might bring him to me to-morrow afternoon." On the following day the farmer took his son and went to the pastor's house. The pious gentleman laid his hand on the boy's head and said, with a benignant smile, "Tell me, my child, where God is: I will give thee an apple, if thou knowest it." The boy looked at him with his large clear eyes, and said at once, "Tell me where God is not, and I will give you two!"

III. 1. Give the nominative and genitive singular, and nominative plural—with the definite article—of the German for *any ten* of the following words:—*hand, arm, foot, head, country, cloud, forest, plant, gate, lane, road, railway, king, soldier, virtue, vice.*

2. Decline (singular and plural) the German for—*this high tree, King Frederick the Great.*

3. Give the German words for:—*William I., Charles II., Louis XIV.; two-thirds, three-fourths, half-past five o'clock.*

4. Give the 3d singular and plural present, imperfect and perfect indicative active of *wissen, kennen, beten, stehen, thun, werden, verlieren, ansehen, befehlen, aufnehmen.*

5. Show by examples what cases are governed by the prepositions *mit, auf, gegen, von, trotz.*

6. Mention any German poems you know, with the names of their authors.

*FIRST PROFESSIONAL EXAMINATION AND FIRST
EXAMINATION FOR B.Sc. (Secs. C, D, and F.)*

CHEMISTRY.

Monday, 20th July 1891.—11 to 1 o'clock.

1. How can (*a*) Mercurous nitrate and (*b*) Mercuric nitrate be prepared from metallic mercury? What is the action on each of these salts of (1) Sulphuretted hydrogen; (2) Ammonia; (3) Caustic Potash.
2. How would you prepare :—
 - (*a*) Chlorine from Ammonium Chloride?
 - (*b*) Caustic Potash from Potassium Sulphate?
 - (*c*) Lead nitrate from galena?
 - (*d*) Oxalic acid from sugar?
 - (*e*) Oil of bitter almonds from toluene?
3. What is the action of heat on each of the following substances :—
 - (*a*) Orthophosphoric acid; (*b*) Phosphorous acid; (*c*) Cupric nitrate; (*d*) Ferrous carbonate; (*e*) Ammonium acetate; (*f*) Calcium benzoate?
4. How is tartar emetic prepared? What is the action of hydrochloric acid on tartar emetic?
5. How many cubic centimetres of Carbonic anhydride measured at 730^{mm} and 20° C. would be obtained by the complete combustion of one gramme of cane sugar?

$$H=1, C=12, O=16.$$

Two grammes of Hydrogen gas at 0° C. and 760^{mm} occupy a volume of 22·33 litres.

Monday, 21st March 1892.—11 to 1 o'clock.

1. Give three instances of substances containing oxygen which decompose so that a part of the substance gains and a part loses oxygen.
2. How is chlorine obtained from hydrochloric acid? Give two cases of metallic chlorides which give off chlorine when heated.
3. What is the action of heat on each of the following :—Calcium carbonate, Zinc carbonate, Barium nitrate, Lead nitrate, Mercuric oxide, Mercuric sulphide.
4. Mention points of distinction (other than optical) between Glucose (Dextrose), and Fructose (Levulose).
5. Solution of caustic potash is added to each of the following solutions, until no further change occurs. Describe what is seen, and give equations :—
 - (*a*) Cupric chloride, (*b*) Mercuric chloride, (*c*) Lead nitrate, (*d*) Antimonious chloride, (*e*) Zinc sulphate, (*f*) Magnesium sulphate.

BOTANY.

Monday 20th July 1891.—2 to 4 o'clock.

Illustrate your Answers by Drawings.

1. Compare the modes of nutrition in *Mucor* and *Scilla*.
2. Describe from without inwards the structure exhibited by a three-year old stem of *Pinus*.
3. Passing from the Pteridophyta to the Spermatophyta (Phanerogamæ) the gametophyte becomes less conspicuous, whilst the sporophyte becomes more differentiated. Explain and illustrate this statement.
4. Describe the structure of a grain of a Grass. What is the use of each of the parts you describe?
5. What effects has light upon plants? Illustrate your answer by comparison of the appearance of the shoot of any Dicotyledonous plant grown in darkness with that of a similar shoot grown exposed to light.

Monday, 21st March 1892.—2 to 4 o'clock.

1. Describe the inflorescence and flower of a grass. Compare the flower of a grass with that of a typical Liliaceous plant.
2. Whence and how do plants obtain the energy necessary for their life?
3. What is the structure of a root-hair? What is its function? Describe the method in which it performs its function.
4. Describe the structure of a vessel. How does a vessel differ from a sieve-tube in (a) position, (b) structure, (c) function.
5. If you carve your name in the bark of the stem of a dicotyledonous tree, such as Beech or Plane, the letters will disappear after some years; but if you cut the letters into the wood of the stem of such a tree they will always be visible in the wood. Why is this?

NATURAL HISTORY.

Tuesday, 21st July 1891.—11 to 1 o'clock.

Only Five Questions to be answered.

1. Describe a typical animal cell, and the method in which it divides to form two cells. Compare with this typical cell, (a) *Amoeba*, (b) *Paramecium*, and (c) *Hydra*.
2. What is the coelom, or body cavity? Trace its development in any animal you know, and describe its condition in an Annelid and in Amphioxus.
3. Describe and contrast the breathing organs of the Lobster, the Cockroach, the Mussel, the Snail, and the Skate.
4. Point out how a Fish (e.g. Raia) essentially differs from (1) a Reptile, and (2) a Mammal (e.g. Ovis), in (a) external characters, (b)

the skeleton, including teeth, (*c*) the heart and circulation, (*d*) the nervous system.

5. What do you understand by the following terms:—Homology, alternation of generations, parthenogenesis, maturation, delamination, variation, metamorphosis? Give examples.

6. What are the boundaries of the Palaearctic and Nearctic Zoological Regions, and how does the Mammalian Fauna of the Neotropical Region differ from that of the Ethiopian?

Tuesday, 22nd March 1892.—11 to 1 o'clock.

Only THREE Questions to be answered.

1. Give an account of the structure of *Arenicola*, and refer to its position in the animal series, giving reasons for your classification.

2. Describe the respiratory organs of Anadon, the Snail, Amphioxus, and the Dog-fish, drawing attention to any homologous parts which are present.

3. Give a short account of the Ungulata, referring especially to the limbs, teeth, and alimentary canal in the more important groups.

4. Mention the distinctive characters of the Reptilia, and point out how a typical lizard differs from (*a*) an amphibian, (*b*) a bird, and (*c*) Ornithorhynchus.

5. Explain briefly the following terms:—Archenteron, Blastopore, Neurenteric canal, Optic chiasma, Thalamencephalon, Proctodæum.

SECOND PROFESSIONAL EXAMINATION.

ANATOMY.

Friday, 10th July 1891.—10 to 12 o'clock.

1. The anterior part of the chest wall having been removed, and the cavity of the pericardium fully opened, what steps would you take to open (*a*) the Right Auricle, (*b*) the Left Auricle? Describe the internal appearance of both auricles (*a*) in an adult, (*b*) in a new-born child.

2. The anterior abdominal wall having been removed, give, step by step, the dissection to expose the whole length of the Abdominal Aorta. Name in order of origin its visceral branches.

3. Give the position and attachments of the annular ligaments of the Ankle. Distinguish between them and the proper ligaments of the ankle-joint. Name, in order of position, the tendons which lie in relation to these annular ligaments.

4. Suppose the Facial Nerve to be divided at its exit from the stylo-mastoid foramen, what groups of muscles would have their nerve-supply affected? Name the individual muscles of each group.

Monday, 28th March 1892.—10 to 12 o'clock.

1. Describe, step by step, the dissection required to expose the Obturator Nerve and its branches, in the upper and middle thirds of the thigh. What muscles does it supply?
2. Describe the course, relations, and distribution within the orbit of the several *motor* Cranial Nerves.
3. Describe the position and relations of the Jejunum and Ileum. What are the naked eye characters of the mucous membrane, and the structure under the microscope?
4. Describe the carpo-metacarpal joint of the thumb. What are its movements? Give the insertion of the muscles which act primarily on it. What are their nerves of supply?

INSTITUTES OF MEDICINE.

Friday, 10th July 1891.—1 to 3 o'clock.

1. (a) Give a detailed account of the secretory and chemical processes in the Stomach after a meal of beef-steak and potatoes.
(b) How has gastric digestion been investigated in man?
2. State the origin, course, distribution, and function of the fibres contained in the cervical sympathetic nerve of a rabbit; and describe the experimental methods by which our knowledge of them has been gained.
3. Describe, in detail, the development of any long bone that is preceded by Cartilage.

Monday, 28th March 1892.—1 to 3 o'clock.

1. Describe the properties of glycogen, and the manner in which it may be prepared from the liver. What are the sources of hepatic glycogen, and what views are entertained regarding its destiny? What conditions are known to produce glycosuria?
2. State the experimental evidence in favour of the existence of vaso-motor (constrictor), or of vaso-inhibitory (dilator) nerves, or of both sets of fibres in the cervical sympathetic, chorda tympani, depressor, great auricular, and sciatic nerves. How are the effects of the two sets of nerve-fibres explained in the above cases?
3. Describe the mode of development of spermatozoa and ova.
4. Make a sketch showing the paths of the rays from an object outside the eye to the image of it on the retina, and show where refractions and reflections occur.

MATERIA MEDICA.

Saturday, 11th July 1881.—10 to 12 o'clock.

1. Name the four officinal compounds of *Magnesium*. Give an account of their therapeutic uses.
2. Describe the preparation of *Arseniate of sodium*. State its dose, and the name and dose of its officinal preparation.

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3. Describe the pharmacological action and the therapeutical applications of *Acetanilide* (Antifebrin).

4. Give an account of the mode of action of the *Bitter Tonics*. Mention any four of them that are officinal.

5. What is *Copaiba*? Describe its physical characters and chemical composition. What are its therapeutical applications, and in what ways may it be prescribed?

Tuesday, 29th March 1892.—10 to 12 o'clock.

1. What is the pharmacological action of *Acetate of Lead*? To what therapeutic purposes is it applied?

2. Describe the local effects and the effects following absorption into the blood of *substances acting on account of their alkalinity*. Mention any six alkaline compounds, each of a different base, that are used in medicine.

3. State the sources, dose, pharmacological action, and therapeutic uses of *Salicylic Acid*.

4. Describe the more important of the physical and sensible properties of *Phenacetine*. What are its therapeutic applications and doses?

5. What *Lamellae* and *Tabellae* are officinal? State the amount of the active ingredient in each of them.

GENERAL PATHOLOGY.

Saturday, 11th July 1891.—1 to 3 o'clock.

1. Enumerate, in order, the primary morbid growths which may occur in the several parts of the Alimentary Canal. Describe fully the naked eye and microscopical characters of a common new growth in the intestine.

2. Describe fully the changes which may be produced in the Kidney in Pyaemia and Septicaemia.

3. Discuss the Pathology of Fatty Degeneration.

4. Describe those changes, produced by Syphilis, which may be found in the arteries and membranes of the brain.

Tuesday, 29th March 1892.—1 to 3 o'clock.

1. What changes occur in the various stages of acute inflammation of a serous membrane?

2. Give an account of the effects of Tuberculosis on the urinary system.

3. What are the causes, naked-eye and microscopic characters, of non-tubercular Broncho-pneumonia?

4. Describe the various forms of ulceration met with in the small intestine.

FINAL PROFESSIONAL EXAMINATION.

SURGERY.

Monday, 15th June 1891.—10 to 12 o'clock.

(Only three Questions to be answered.)

I. Describe the appearances of—A. A *healing ulcer*. B. A *callous ulcer*.

What treatment do you recommend for callous ulcer? What is the rationale of your treatment?

II. Describe the operation for *Strangulated Inguinal Hernia*. What would you do if you found the bowel gangrenous? What are the causes of death after operation?

III. Describe the condition of the arm immediately after division of the *Musculospiral nerve* in the middle of the upper arm. How would you treat such a case? What result would you expect from your treatment?

IV. Describe the anatomical arrangement of the *flexor sheaths* in the *hand*. What practical bearing has this arrangement on Surgery? What treatment do you recommend for chronic effusion into the common flexor sheath?

MIDWIFERY.

Monday, 15th June 1891.—1 to 3 o'clock.

(All three Questions to be answered.)

I. EXTRA-UTERINE GESTATION.

1. Enumerate the Varieties.
2. Give the Symptoms and Diagnosis of the commonest variety at the second month.
3. What are the possibilities to the Ovum in such a case?

II. TRANSVERSE PRESENTATIONS.

1. Describe the relations of the Fœtus in the Commonest Position.
2. Give the Diagnosis.
3. Give the Dangers—(1.) To Mother. (2.) To Child.
4. What is the established rule of Treatment?

III. CARCINOMA UTERI.

1. What are the various sites?
2. Give the Symptoms and Diagnosis in an early case in the most frequent site.
3. What is the usual Course in such a case?
4. What are the Conditions for Operative interference?

PRACTICE OF PHYSIC.

*Tuesday, 16th June 1891.—10 to 12 o'clock.**(Only three Questions to be answered.)*

1. What is Ileus? Name its chief Causes. Describe the Morbid Anatomy and Clinical History of a case of Intussusception, and indicate the line of treatment which you would follow.

2. Name the chief varieties of Anaemia. Give the characteristic Clinical features of Chlorosis and Pernicious Anaemia, writing a prescription (as you would send it to the druggist) for each.

3. Give the physical signs and the symptoms proper to Mitral and to Aortic Incompetence. State shortly the elements of prognosis in each affection.

4. Give the causes, symptoms, complications, pathology, and treatment of Cirrhosis of the Kidney.

MEDICAL JURISPRUDENCE.

Tuesday, 16th June 1891.—1 to 3 o'clock.

I. CARBOLIC ACID.

1. What are the symptoms produced by a poisonous dose of this substance?
2. What treatment would you adopt in such a case?
3. What *post-mortem* appearances would you expect to find?

II. SIGNS OF DROWNING.

1. When a body is found lying in water, how would you determine whether or not drowning had been the cause of death?

III. EXTERNAL VIOLENCE.

A man in a street riot receives a kick on the abdomen; he is carried to the Police Station, and dies shortly after arrival.

1. What may have been the cause of death?
2. What external appearances might you see?
3. What internal *post-mortem* appearances might you expect to find?

PUBLIC HEALTH.

Tuesday, 16th June 1891.—1 to 3 o'clock.

I. WATER SUPPLY.

1. A family takes a house in the country for the summer. The only source of water supply is a well. What observations would you make as to the suitability of this well for domestic use?

2. What scientific investigations would you desire to be made in order to confirm your opinion?

3. Pending such enquiries, what advice would you give to the family as to the use of the water?

II. DISPOSAL OF SEWAGE.

1. Describe the method of purifying water-carried sewage by intermittent downward filtration.

2. State what advantages this method possesses.

III. VITIATED AIR.

1. What are the changes which take place in the air of an overcrowded apartment?

2. Without going into details, what observations could you make to prove the vitiation of the air?

CLINICAL MEDICINE.

Examinations written, oral, and practical, on cases in wards of the Royal Infirmary.

CLINICAL SURGERY.

Examinations on the Symptoms, Diagnosis, and treatment of Surgical Cases in the wards of the Royal Infirmary.

PRESCRIPTION WRITING.

Monday, 15th June 1891.—3.30 o'clock.

* * * *Each prescription to be written in Latin, without any contraction, except the directions for the patient, which may be written in English.*

1. Prescribe a Suppository containing Conium, Hyoscyamus, and Opium, for a case of malignant disease of the bladder.

2. Prescribe a mixture containing Bromide of Ammonium and Chloral-hydrate for whooping-cough in a child five years of age.

3. Prescribe four pills containing Elaterium as a cathartic in general dropsy.

Fellowships, Scholarships, Bursaries, and Prizes in Medicine.

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I.—FELLOWSHIPS.

I.—THE SYME SURGICAL FELLOWSHIP.

This Fellowship, of the annual value of £105, 17s. 6d., and tenable for two years, is open to competition among Bachelors of Medicine and Masters in Surgery of not more than three years' standing, who shall, in the opinion of the Examiners, have passed a creditable examination for these degrees, and who shall present the best Thesis on a Surgical subject giving evidence of original research, or practical talent, whether such Thesis be given in for Graduation or otherwise. The next award may be at the Graduation Ceremonial in August 1893. Theses intended for competition must be lodged with the Dean of the Medical Faculty on or before 30th April 1893. *See* Deed of Foundation, at p. 310 of CALENDAR for 1872-73.

1889. Alex. Edington, M.B., C.M. | 1891. *Alexander Miles, M.D.*

II.—THE LECKIE-MACTIER FELLOWSHIP.

The Leckie-Mactier Fellowship, of the annual value of £70, is awarded to Bachelors of Medicine of not more than three years' standing, and is tenable for three years. The examinations comprise written reports and commentaries on medical, surgical, and gynecological cases in the University Wards in the Royal Infirmary, and written examinations in Midwifery, Medical Jurisprudence, and Public Health; also oral examinations in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Every holder of the Fellowship must, before the expiry of his tenure, transmit to, and if required read publicly in presence of the Medical Faculty, a communication embodying the result of original observation or historical research in some department of medicine. Next appointment may be made in November 1892. *See* Deed of Foundation at p. 365 of CALENDAR for 1880-81.

1889. *Thos. W. Eden, M.B., C.M.*

III.—THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship—candidates for which must have taken the Degree of Doctor of Medicine at the University of Edinburgh—is in the patronage of the Trustees of the British Museum, and is of the annual value of £144. The office is tenable for five years, at the expiration of which period the Lecturer is ineligible for the next election. The number of

lectures is not to be less than twelve in each year, nor more than three in the same week. The course is required to be annually delivered between the first of November and the end of July following, at such public places in the United Kingdom as the Trustees shall approve. The public are admitted without fee. The Lecturer is required at the termination of each course to deposit a copy, or full extract of such course of lectures, with the Principal Librarian of the British Museum, to whom application may be made for further particulars.

IV.—FREELAND BARBOUR FELLOWSHIP.

This Fellowship is of the value of £100, and is open to award, in each alternate year, to the Bachelor of Medicine and Master in Surgery who has gained the highest collective marks in Anatomy, Physiology, and Pathology in the Professional Examinations, and who is prepared to devote not less than one year to original research in Midwifery or diseases of women, in any of the Laboratories or Practical Departments of the University of Edinburgh. The next award will be made in July 1892. (*See* Deed of Foundation at page 517 of CALENDAR for 1889-90.)

1888. John David Williams, M.B., C.M.

1890. *R. M. Home, M.B., C.M. (resigned)*

„ *Gerald Fitzgerald, M.B., C.M.*

THE WILLIAM DICKSON TRAVELLING FUND.

This is a fund for the purpose of assisting Graduates of any Faculty, of not more than three years' standing, to travel for the purpose of study or research. For particulars, see page 227.

II.—SCHOLARSHIPS.

I.—ETTLES SCHOLARSHIP IN MEDICINE.

This Scholarship was founded in 1868 by Miss Mary Ettles of Inverness, and is of the annual value of about £25. It is awarded annually to the Bachelor of Medicine and Master in Surgery of the University of Edinburgh, whom the Faculty of Medicine may consider the most distinguished of that year. (*See* Deed of Foundation, at page 242 of CALENDAR for 1868-69.)

1887. G. O. C. Mackness, M.B., C.M.	1890. Carstairs C. Douglas, M.B., C.M.
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1888. T. W. Eden, M.B., C.M.	1891. <i>Harry Rainy (M.A.), M.B.,</i>
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1889. E. G. Pilgrim, M.B., C.M.	<i>C.M.</i>
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II.—SIBBALD MEDICAL SCHOLARSHIP.

This Scholarship is of the annual value of £40. *First*, The Scholarship shall be bestowed on, and held by, a Student in the Faculty of Medicine in the University of Edinburgh, *who does not hold any other Scholarship or Bursary*, and shall be tenable for three years, during

which period the Scholar shall complete the prescribed course of medical study required for Candidates for the degree of Bachelor of Medicine. *Second*, The Scholarship shall be bestowed upon the Student obtaining the highest place by Competitive Examination, and shall be open to all Candidates who have not previously been Students of Medicine in any other School or University, and who have attended Medical Classes in the University of Edinburgh, for *not less* than one Winter and one Summer Session, and for *not more* than one Winter and two Summer Sessions. The Competitive Examination shall be in Chemistry, Botany, and Natural History, and shall be conducted in such manner as the Senatus Academicus shall, in concurrence with the Trustees, prescribe. The next competition may take place in October 1894. Application to be made to Messrs MACKENZIE, INNES, & LOGAN, W.S., 23 Queen Street, Edinburgh.

1889. Robert Hutchison

| 1891. *James R. Watson*

III.—THOMSON SCHOLARSHIP.

The Thomson Scholarship, value £40, tenable for four years, open to matriculated students commencing their first Winter Session in Medicine. The examination is on Botany, Zoology, and Elementary Mechanics. The Scholarship is awarded to the candidate who shall obtain the highest number of marks in the examination. The Trustees, however, reserve power to themselves to withhold the appointment should none of the candidates obtain a sufficiently high percentage of the marks in the examination. Candidates must send in their names to the agents for the Trust before the first day of October in the year in which there is a competition for the Scholarship. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or of the city of Edinburgh, have a preference. Candidates claiming such preference must intimate their names to the Agents for the Trust at least one clear week before the examination. The next appointment may be made in October 1894. For other particulars, application to be made to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street, Edinburgh, the Agents for the Trustees.

1887. Robert Brown

| 1890. *J. Stewart Norvell, B.Sc.*

IV.—COLDSTREAM MEMORIAL MEDICAL MISSIONARY SCHOLARSHIP.

The Coldstream Memorial Medical Missionary Scholarship was founded in memory of the deceased John Coldstream, M.D., F.R.C.P.E. Value £25, tenable for four years. The holder must be a first year's Medical Student, who intends to devote himself to the life of a Medical Missionary at home or abroad. He must be approved of by the awarders, and pass the preliminary examination before beginning his

studies. Next award in 1895. A preference is given to students connected with the Edinburgh Medical Missionary Society. A full copy of the conditions can be had on applying to John P. Coldstream, W.S., 6 Buckingham Terrace, Edinburgh. See Conditions in CALENDAR for 1879-80, p. 357.

1887. James W. Dawson | 1891. James Hunter White

V.-XII.—VANS DUNLOP SCHOLARSHIPS.

Eight Scholarships, of £100 each, tenable for three years. Not more than one at a time can be held by the same person. See Excerpt from Will of Dr Vans Dunlop, p. 380 of CALENDAR for 1880-81.

V. One is awarded to the Candidate who, at either the March or the preceding October Medical Preliminary Examination, has obtained the highest number of marks in the Subjects required to enable him to appear for a Professional Examination, provided (1) that he has not already passed the said Preliminary Examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. The next award may be made in March 1893.

1887. W. E. Fisher, H. S. W. W. Jones, B.Sc.—equal

1890. William Anderson Stephen

W. D. Adams gained the first place in the Examination, but was disqualified by the then existing regulations.

VI. One is awarded for subjects of first year's study, viz., Botany, Zoology, Chemistry, and Anatomy, to the Student who, having attended, for the first time, a systematic course of Lectures on each of the above Subjects during the preceding Winter Session, and also during either the preceding or current Summer Session, obtains the highest number of marks collectively in the University Class Examinations in those Subjects; provided that he has gained not less than 60 per cent. of the marks in each of all the Subjects. The successful Candidate shall continue his medical studies in this University during his tenure of the Scholarship. The next award may be at the end of July 1893.

1887. J. W. Bone and G. Elder—equal

1890. J. P. Stewart

VII. One is awarded for subjects of second year's study, viz., Physiology and Surgery, to the Student who, during the Winter Session, shall have attended, for the first time, a systematic course of Lectures on each of these Subjects, and who shall have obtained the highest collective number of marks in the Class Examinations; provided that he has gained not less than 60 per cent. of the marks in each of the two subjects. The successful Candidate shall continue his medical

studies in the University during at least two years of his tenure of the Scholarship, whilst the remaining year must be passed in study, either in this University, or in some other School of Medicine to be approved by the Faculty of Medicine. The next award may be at the end of March 1893.

1887. John W. Crerar

| 1890. *Louis Godfrey Irvine*

VIII.-X. Three Scholarships, of which one is awarded annually at the end of the third Winter of Medical Study to the Student who, after having attended within the University the Subjects of Examination, shall obtain the highest number of marks in an Examination, specially conducted for the purpose, on Anatomy, Physiology, *Materia Medica*, and Pathology. The successful Candidate is required to continue his studies in this University, for at least the first year of his tenure of these Scholarships, and during the remaining period to prosecute research in some branch of study comprised in the Medical curriculum. The award is made annually in April.

1888. Percy C. Evans

| 1891. Robert Hutchison

1889. Robert Main Horne

| 1892. *R. W. Briggs*

1890. E. Fuller

XI. One in Chemistry and Chemical Pharmacy.

(1.) The Subjects of Examination are—

(a) Inorganic and Organic Chemistry, and the connection between the Chemical and Physical character of Substances.

(b) Qualitative and Simple Quantitative Analysis of Inorganic Substances, and the Preparation and Testing of the Chemical Substances in the British Pharmacopœia.

(2.) The Examination in subjects (a) is similar, and held at the same time, as that for the Second B.Sc. Examination. The Examination in subjects (b) is conducted practically in the Laboratory.

(3.) The Competition is open to all Students of the University, from the second to the sixth year (inclusive) of their attendance, and the next may take place in April 1894.

1888. Francis Maitland Gibson and Hugh Marshall—equal.

1891. *William Cossar Mackenzie, D.Sc.*

XII. One in Natural History, including Geology and Botany.

(1.) The subjects Natural History, Geology, and Botany are coequal in the Examination, and the Examination in each of the three subjects is similar to that for the Second B.Sc. Examination, and consists of two parts—a Written Examination extending over not less than three hours, and a Practical Examination with specimens.

(2.) The next Examination will be held in April 1895, at the same time as the Second B.Sc. Examination.

(3.) The Competition shall be open to all Students of the University, from the second to the sixth year (inclusive) of their attendance.

1889. J. Graham Kerr.

1892. *J. D. F. Gilchrist, B.Sc.*

XIII.—THE MURCHISON MEMORIAL SCHOLARSHIP.

This Scholarship consists of the annual proceeds of about £1000 awarded in alternate years in London and Edinburgh, for proficiency in Clinical Medicine. Candidates must be registered medical students who have attended for not less than four nor more than six years at Hospitals and Classes at Edinburgh or London, recognised by the University of Edinburgh, or the Royal College of Physicians of London. The competition in 1892 will be held in London; and that in 1893 will be held in Edinburgh.

1887. W. S. Colman, M.B.

1888. H. T. Tylden, M.A., M.B.

1889. Arthur J. Whiting, M.B., C.M.

1890. Bedford Pierce, M.B.

1891. No award.

XIV.—THE STARK SCHOLARSHIP IN CLINICAL MEDICINE.

This Scholarship of £112, is tenable for one year, and is for the encouragement of the study of Clinical Medicine. It is open to competition among all matriculated students of the University who are or have been in attendance at the University Class of Clinical Medicine, and to Bachelors of Medicine of the University of not more than eighteen months' standing who have attended this class. It is open to competition every second year alternately with the competition in Edinburgh for the Murchison Memorial Scholarship. The Examination, oral and in writing, shall include (a) Examination of Patients; (b) Questions on Therapeutics and Pathology; (c) Examination of Specimens. Each holder of the Scholarship shall be required to devote his time in the wards of the Professors of Clinical Medicine to original investigation or other work directly connected with Clinical Medicine; to report his proceedings every three months to the Professors of Clinical Medicine; and, within a reasonable time after the expiry of his tenure of the Scholarship, to present to the Faculty of Medicine a written statement of the results of his investigations or other work. This Scholarship cannot be held along with any other Fellowship, Scholarship, or Bursary in a Scottish University. The next Competition will take place in July 1892. See Deed of Foundation at p. 427 of CALENDAR for 1884-5.

1888. Jas. Brown Bird, M.B., C.M.

1890. R. D. Clarkson, B.Sc., M.B., C.M.

XV.—BUCHANAN SCHOLARSHIP.

This Scholarship consists of the proceeds of £1000, given by Mrs James Buchanan, who endowed the Buchanan Medical Ward in the Royal Infirmary. The Scholar acts as House Physician to the University Gynecological Ward as one of the conditions of tenure of the

scholarship, and also gives assistance in the Examination of Class Exercises. The Scholarship is awarded annually to the Graduate in Medicine who shows the highest proficiency in Midwifery and Gynaecology.

1887. W. F. Wright, M.B., C.M.	1890. C. C. Douglas, M.B., C.M.
1888. J. Fordyce, M.A., M.B., C.M.	1891. William M. Cairns, M.B., C.M.
1889. G. Wilkinson, M.B., C.M.	

XVI.—THE JAMES SCOTT SCHOLARSHIP.

This Scholarship, founded by Mrs Mary Ann Scott or Thomson of Hawick, of the value of £45, is awarded annually at the Graduation Ceremonial in Medicine in August for proficiency in Midwifery. The award is based upon the results of the Competitive Examinations in the Class of Midwifery, upon the character of the records of Cases of Midwifery attended by the Candidate at the Royal Maternity and Simpson Memorial Hospital, and upon the position obtained by him at the Final Examination for Degrees in Medicine. The Scholarship is for one year, but may, in special circumstances, be continued for another year. See Deed of Foundation, p. 410, CALENDAR, 1883-84.

1887. J. G. Havelock, M.B., C.M.	1890. Wm. Paterson, M.B., C.M.
1888. Thos. W. Eden, M.B., C.M.	1891. Robert Craw, M.B., C.M.
1889. James Lackie, M.B., C.M.	

XVII.—HOPE PRIZE SCHOLARSHIP.

The Hope Prize Scholarship has been instituted in connection with the Chemical Laboratory of the University, and is of the value of about £21. It is awarded annually in March, to the student who, intending to continue his studies and attendance in the Chemical Laboratory, has, in the opinion of the Professor of Chemistry, most distinguished himself during the previous session in the Chemical Laboratory. He shall be bound, during the succeeding Summer and Winter Sessions, to assist the Professor of Chemistry in the Chemical Laboratory, and shall be subject to his directions as to the nature and amount of the assistance to be so given. For further particulars see CALENDAR, 1887-88, p. 424.

1888. John Simpson Ford	1889. Lapsed Scholarship, Thomas S. Murray
1888. Lapsed Scholarship, Andrew King	1890. Alexander Dingwall White
1889. William Cossar Mackenzie	1891. Theodore Rettie.
	1892. William White Taylor.

XVIII.—THE MOUAT SCHOLARSHIP IN THE PRACTICE OF PHYSICS.

This Scholarship, which will consist of the annual proceeds of about £1500 given by Frederick John Mouat, M.D., of the Local Government Board, London, formerly Professor of Medical Jurispru-

dence in the University of Calcutta, has been founded in connection with the class of Practice of Physic, but is not to be open for competition until the death of two liferenters.

XIX.—MACKAY SMITH SCHOLARSHIP IN CHEMISTRY.

This Scholarship is of the annual value of £25, tenable for two years, and is open for competition to Students who have attended the Class of Chemistry in this University. The successful Candidate is bound to attend the Class of Chemistry, or to prosecute the study of Chemistry during at least one year of his tenure of the Scholarship, in such way as the Senatus Academicus may direct or approve. The next Examination will take place at the end of Session 1893-94.

1888. Martin Hugh Foye

1892. *J. W. Horne, M.A.*

1890. R. W. Briggs

III.—BURSARIES.

No of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1864	Dr Abercrombie, Cape Town.	£20 0 0	1	4	£20 0 0	Governors of George Heriot's Trust.
II.	1871	Dr J. R. Sibbald's Trustees.	{ About 150 0 0 }	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
III.	1873	Dr Mackie's Trustees.	60 0 0	2	2	30 0 0	Professors of Fac. of Med. in Univ., Edin.
IV.	1873	Mr Grierson of Ogc-castle's Trustees.	80 0 0	4	3	20 0 0	Senatus.
V.	1878	Dr Andrew Thomson	200 0 0	8	4	25 0 0	Trus. of Dr Thomson.
VI.	1878	William Mackenzie	42 10 0	2	1	21 5 0	Senatus.
VII.	1878	John Aitken Carlyle	56 0 0	2	1	28 0 0	Senatus.
VIII.	1882	Mrs Ronald of Liverpool	80 0 0	2		About 40 0 0	Senatus.
IX.	16—	George Heriot. Re-modelled 1887	480 0 0	6	4	30 0 0	Governors of George Heriot's Trust.
X.	1890	Major Robert Orr Crichton of Lynn, M.D.	About 1000 0 0	20	4	50 0 0	Senatus Academicus.
XI.	1809	Dr Donald Grant, London.	80 0 0	2	4	90 0 0	Dr Grant's Trustees.
XII.	1846	John Jamieson, Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal and Two Professors.
XIII.	1883	Wm. Renton, Edinburgh.	19 19 6	1	1	19 19 6	Professors of Mathematics, Natural Philosophy, Chemistry, and Political Economy.
XIV.	1886	Richard Allan, Feuvar, Kelso.	90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
XV.	1889	Daniel Maclaurin, London.	70 0 0	1	4	70 0 0	Town Council.

I. *Abercrombie Bursary*.—Open by competition, in the event of more than one candidate coming forward, to Students who have been brought up in Heriot's Hospital, and have finished their course as Heriot Bursars, to aid them in further prosecution of their studies for any of the learned professions. Students in the Faculty of Medicine to be always preferred. Candidates are referred to the Treasurer of Heriot's Hospital, 20 York Place, Edinburgh. *Bursar*—*Peter F. Gillies*.

II. *Sibbald Bursaries*.—These Bursaries, each tenable for three years, are available to Students in the Faculty of Arts, Medicine, Law, or Divinity, entering the University who have not previously attended any University in the United Kingdom or elsewhere, *and who do not hold any other Bursary or Scholarship*, but no objection to a Candidate that he has, during the previous Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. The examination is the same as the Entrance and Bursary Examination in the Faculty of Arts at the commencement of each Winter Session. Application to be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh, before 1st October.

III. *Mackie Bursaries*.—These Bursaries are awarded to Students of Medicine of the University, one of which is open to Students who have completed their First Annus Medicus, and the other to Students who have completed their Second Annus Medicus, and who are, in the opinion of the Faculty of Medicine, in such pecuniary circumstances as to require assistance. *Bursars*—1890, *Arthur Foster, J. G. Christie, M.A.*

IV. *Grierson Bursaries*.—Candidates from the parishes of Crawford or Leadhills, about to commence their Medical Curriculum, who have passed in the University of Edinburgh a satisfactory examination in the preliminary subjects required by Article I. of the Ordinances for Graduation in Medicine, who have been diligent students, and who require pecuniary aid to enable them to pursue their studies, have a preference. In the case of more candidates than one, the Bursary shall be awarded to the best qualified, on examination in the subjects above referred to.

Failing the appointment of preferential candidates, the Bursary will be tenable for periods of one year only, during four successive years, in manner following viz. :—The 1st year Bursary shall be awarded to the student who has taken the highest place in the whole subjects required by Ordinance for the preliminary examination which has to be passed before the first professional examination, provided (1) that he has not already passed the said preliminary examination; (2) that at the date of the examination he has not completed his twenty-first year; and (3) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examinations of this University, which have to be passed before the First Professional Examination. The 2d year Bursary shall be awarded by competitive examination to the student commencing the Second Winter Session, who having already passed the subjects of the Preliminary Examination required for Graduation in Medicine, shall pass the best examination in the subjects of

Chemistry, Botany, and Natural History. The 3d year Bursary shall be awarded by competitive examination to the student commencing the Third Winter Session who, having already passed the First Professional Examination, shall pass the best examination in the subjects of Anatomy and Physiology. The 4th year Bursary shall be awarded by competitive examination in the subjects of *Materia Medica* and Pathology. *Bursars*—1891, first year, *G. P. Henderson*; second year, *Colin M'Vicar, M.A.*; third year, *Charles Crerar*; fourth year, *G. W. F. Macnaughton*.

V. One *Thomson Bursary* is awarded at each of the Preliminary Examinations held in Spring and Autumn, to the Candidate who, being about to commence his Curriculum, takes the highest place in a sufficient number of subjects to enable him to appear for Professional Examination: provided (1) that he has not already passed the said Preliminary Examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examinations of this University which have to be passed before the First Professional Examination. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or of the city of Edinburgh, have a preference. Candidates claiming a preference must intimate their names to Messrs Traquair, Dickson, & Maclaren, W.S., 11 Hill Street, Edinburgh, the agents for the Trust, at least one clear week before the Examination, from whom further particulars may be obtained. *Bursars*—1888-89, *Alfred Cowper, William B. Craig*; 1889-90, *W. D. Adams, W. A. Potts*; 1890-91, *Duncan M. Mackay, Fred. R. Jones*; 1891-92, *Angus Macdonald, T. R. W. Armour*.

VI. *MacKenzie Bursaries*, open to Students in the Junior and Senior Anatomy Classes, who shall display the greatest industry and skill in Practical Anatomy, awarded at the end of each Session. See CALENDAR for 1879-80, p. 353. *Bursars*—1892, Senior, *J. M. Beattie, M.A.*, *H. V. Munster*—equal; Junior, *J. T. Hewatson, G. F. Whyte*—equal.

VII. *John Aitken Carlyle Bursaries*, one open to Students of the first year, awarded after examination in Anatomy and Chemistry, the other to Students of the second year, awarded after examination in Anatomy and Physiology. See CALENDAR for 1879-80, p. 350. *Bursars*—1892, Senior, *James Watson*; Junior, *J. A. Milroy*.

VIII. The *Anderson Bursaries* have been founded by Mrs Ronald of Liverpool, and will come into operation on the death of an annuitant. For Deed of Foundation, see CALENDAR 1882-83, p. 396.

IX. The *Heriot Bursaries* are for Students unconnected with the Hospital, entering upon a regular Curriculum with a view to graduation. (For remodelled scheme, see CALENDAR, 1887-88, p. 498.) For subjects of Examination, &c., see under Bursaries open in Faculty of Arts.

X. *Crichton Bursaries*.—These Bursaries are open to Students entering the Faculty of Medicine of this University who have been born in Scotland. The Examinations will be in Latin, Greek, French, German, Mathematics, Logic, and Moral Philosophy; and each Bursary will be of the annual value of £50, tenable for four years, provided the Bursars continue Students of the Medical

Faculty of this University. Unapplied balances may be applied for a period of three years in assisting Bachelors of Medicine of the University, who have studied in the University for not less than four years, in the prosecution of any branch of Medical Study either at this University or at any other University. See Excerpt from Deed, p. 540 of CALENDAR for 1891-92.

XI. The *Grant Mortification* is for Students of the University of Edinburgh, of the name of Grant. The holders may attend the Arts, Medical, Divinity, or Law Classes. Application for information may be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh. *Bursars*—1890, James Taylor Grant, Lewis Grant.

XII. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Robertson, Culter and Biggar. The Bursar may attend Classes in any of the Faculties. *Bursar*—1889, Andrew Rae.

XIII. The *Renton Bursary*, founded by the late William Renton, 20 Royal Terrace, Edinburgh, is for a Student pursuing his studies in the classes of Natural Philosophy, Mathematics, Chemistry, and Political Economy, or such of them as he may consider proper, and who may require assistance. The Bursary is tenable for one year, and cannot be held by any one under the age of sixteen or above twenty-one. It is filled up in November each year. *Bursar*—1889, F. R. S. Walker.

XIV. *Allan Bursaries*.—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Medicine, or Law, in the University of Edinburgh, or to Students attending the classes in said University necessary for Degrees in Science; and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

XV. *Maclaurin Bursary*. This Bursary, tenable for four years, is by the will of the founder to be called the "Maclaurin Bursary," and is restricted to Students of the Founder's name of Maclaurin (or in Gaelic orthography "Maclalhrin"). It may be held in any of the Faculties. See Deed of Foundation, p. 544 of CALENDAR for 1890-91.

IV.—PRIZES.

I.—NEIL ARNOTT PRIZE FOR EXPERIMENTAL PHYSICS.

This Prize, of the value of about £35, presented to the University by Dr Neil Arnott of London, is awarded annually in October to the Candidate who shall pass with the greatest distinction the Ordinary Examination in Natural Philosophy for the Degree of M.A. Candidates must have been Students of Medicine of this University during

either a summer or a winter session ; and the successful candidate must continue a Student of Medicine at this University during the next Winter Session, failing which, the prize will be forfeited and assigned to the competitor next in merit. No student can appear for examination after the completion of his third *annus medicus* ; and no candidate shall be allowed to offer himself more than once.

In the event of a competitor, qualified as above, not coming forward, the prize will be awarded to a Candidate for a Degree in Arts who shall pass with most distinction the ordinary examination in Natural Philosophy. (*See* Deed of Foundation at p. 274 of CALENDAR for 1870-71.)

1887. T. W. E. Fisher

1888. H. S. W. Jones

1889. Andrew Walker

1890. O. D. Robson

1891. *David Landsborough,*
M.A.

II.—HOPE CHEMISTRY PRIZE.

This prize was founded by the late Professor Thomas C. Hope in 1844, for the promotion of the Study and Science of Chemistry in the University, in such manner as the Principal and Professors may appoint. It is competed for biennially, at a special examination open to all Students of the University who have worked for eight months or for two Summer Sessions, in the Chemical Laboratory of the University, and who are not more than twenty-five years of age. The examination is in Chemistry, and is conducted by the Professor of Chemistry, in conjunction with two Examiners appointed by the Senatus, and is practical as well as written. The successful Candidate is to spend the succeeding academical year in working in a Laboratory or Laboratories, under conditions approved by the Senatus, and to receive £100, in such sums, and at such intervals, as may be appointed by them.

No person can hold the Hope Chemistry Prize more than once.

A Competition for this Prize will be held in July 1893; Candidates must send in their names to the Professor of Chemistry prior to 20th June 1893.

1887. James Walker, B. Sc.

1889. { W. C. Mackenzie, B.Sc. } equal
 { T. R. Marshall, D.Sc. }

1891. *John Shields, D.Sc.*

III.—THE ROBERT WILSON MEMORIAL PRIZE.

This Prize was founded by John Wilson of South Bantaskine, in memory of his son, Robert Wilson, and is of the value of £8, 16s. 2d. It is annually awarded at the close of the Winter Session to the student in the senior Chemistry Class who takes the highest honours. See Deed of Foundation at p. 351 of CALENDAR for 1876-77.

1888. H. S. Wansbrough Jones

1889. F. C. M. Hutchinson

1890. Edward Crarer

1891 { James H. Frazer } equal
 { George Shaw }

1892. *John W. Paterson*

IV.—THE ELLIS PRIZE FOR PHYSIOLOGY.

This Prize consists of the proceeds of a sum of £500 bequeathed by the late Daniel Ellis, Esq., to the Principal and Faculty of Medicine of the University of Edinburgh, accumulated for three or five years. Value about £25 per annum. It is awarded for the best Essay or Treatise on some subject of Animal or Vegetable Physiology proposed by the Faculty for competition to Students or Graduates of not more than five years' standing. The next award may be made in 1893. Subject—"The Functions of Wood." Essays in Competition to be lodged with the Dean of the Faculty of Medicine on or before 30th April 1893.

1890. *Gustav Mann*

V.—PRIZES FOR THESES.

Gold Medals, each of the value of £10, are awarded annually on the day of graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

VI.—THE GOODSIR MEMORIAL PRIZE.

This Prize was founded in 1872 by the subscribers to the fund for a memorial of the late Professor John Goodsir. It is in the patronage of the Principal, Dean of the Faculty of Medicine, and Presidents of the Royal Colleges of Physicians and Surgeons of Edinburgh, and is for the encouragement of the study of Anatomy and Physiology. It is given triennially, and is of the value of £60. It is open to all Graduates in Medicine of the University of not more than three years' standing at the time of the competition, and to Licentiates of the Colleges of Physicians or Surgeons of Edinburgh of a like standing, who have attended within the University the same number of classes as are required for the Degree of M.B. The Prize is awarded for the best Essay containing results of original investigations in Anatomy, Human and Comparative, either Normal, or Pathological, or in Experimental Physiology.

The next award may be made in August 1895, and competing Dissertations must be lodged with the Professor of Anatomy not later than the 30th April previously. *See* Deed of Foundation at p. 314 of CALENDAR for 1872-73.

1889. *H. F. Waterhouse, M.D.*

VII.—THE WIGHTMAN PRIZE IN CLINICAL MEDICINE.

This Prize of £10, 10s. was founded by Mrs E. Wightman, in memory of her son, J. T. Wightman, M.B., C.M., and is annually awarded at the close of the Summer Session to the student attending the Class of Clinical Medicine for the best Dissertation on any subject presented by the Faculty of Medicine, or for the best Report and Commentary on

cases which have during the previous Winter and Summer Sessions been treated in the University Clinical Wards in the Royal Infirmary. Three months' notice of subject is given by the Faculty of Medicine. *See* Deed of Foundation at p. 348 of CALENDAR for 1876-77.

The Prize, which is open to members of the Clinical Class of either Winter 1891-92 or Summer 1892, will be awarded for the best report and commentary on cases. The Essays to be given in on 6th July.

1888. A. J. Whiting, M.B., C.M.	1890. Not awarded
1889. Not awarded	1891. <i>Douglas C. Watson</i>

VIII.—THE BEANEY PRIZE.

This Prize of £37, 10s. was founded in 1878 by James George Beaney, Esq. of Melbourne. It is awarded at the Graduation Ceremonial in Medicine to the Graduate in Medicine and Surgery of the year who, having attended within the University courses on Anatomy, Surgery, and Clinical Surgery qualifying for Graduation, obtains the highest number of marks during his examinations in these subjects for the Degrees of Bachelor of Medicine and Master in Surgery. The Senatus has the power of withholding the Prize in the event of no Student passing the above examinations with sufficient merit. *See* Deed of Foundation at p. 371 of CALENDAR for 1878-9.

1887 { A. A. Brueré, M.B. C.M. } equal	1890. G. Fitzgerald, M.B., C.M.
{ W. A. Turner, M.B. C.M. }	1891 { <i>Harry Rainy, M.A.,</i> } equal
1888. J. C. Webster, M.B., C.M.	{ <i>M.B., C.M.</i> }
1889. Eustace Graham Pilgrim,	{ <i>G. Hennan, M.B., C.M.</i> }
M.B., C.M.	

IX.—THE CAMERON PRIZE.

This Prize was founded in 1878 by the late Dr Andrew Robertson Cameron, of Richmond, New South Wales. It consisted of the annual proceeds of a sum of £2000, to be given annually "to the practitioner or member of the medical profession who shall be adjudged to have made the most valuable addition to Practical Therapeutics during the year preceding, and in determining such question, the word Therapeutics shall be taken in its widest sense as including every agent, or agency capable of influencing the human body in the maintenance or improvement of health, avoidance or cure of diseases, or the alleviation of suffering."

The regulations have been remodelled by the Educational Endowments (Scotland) Commission, and the annual proceeds, which, after defraying the necessary expenses, amount to about £80, may be awarded annually to a person who in the course of the five years immediately preceding has made any highly important and valuable addition to Practical Therapeutics. The Prizeman is required to deliver a lecture or course of lectures on the addition to Practical Therapeutics so made by him, or to publish an account of such addition

in such manner as the Senatus may prescribe. The prize will not be awarded if, in the opinion of the Senatus, no addition to Practical Therapeutics has been made within the said period of five years of sufficient importance and value to justify the awarding of the prize. The prize is awarded annually at the Graduation Ceremonial in August. See Remodelled Regulations, p. 497 of CALENDAR for 1888-89.

1889. M. Pasteur.

1890. Sir Joseph Lister, Bart, M.B., LL.D., F.R.S.

1891. *David Ferrier, M.D., F.R.S.*

X.—THE DOBBIE SMITH PRIZE IN BOTANY.

This prize, which consists of a Gold Medal, is open to competition each alternate year to all Matriculated Students of the year of the award, for an Essay on a Botanical subject. The subject of the next competition is an original investigation "On the Structure, Development, and Life History of any British Flowering Plant;" and the memoir is to be accompanied with a series of illustrative specimens. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before the 1st of July 1892. The prize will be awarded to the successful competitor at the Graduation Ceremony of August 1892.

1887. James A. Terras

1889. Gustav Mann

1891. No award

XI.-XXI.—THE GUNNING VICTORIA JUBILEE PRIZES.

Dr Gunning, of Edinburgh and Rio de Janeiro, has founded Eleven Post-Graduation Prizes of the value of £50 each, and each recurring triennially, viz. :—(1) The Monro prize for Anatomy; (2) The Bell prize for Physiology; (3) The Edward Forbes prize for Zoology, &c.; (4) The Hutton Balfour prize for Botany; (5) The Joseph Black prize for Chemistry; (6) The Christison prize for Materia Medica; (7) The Lister prize for Surgery; (8) The Gregory prize for Practice of Physic; (9) The John Thomson prize for Pathology; (10) The Simpson prize for Obstetrics; (11) The Alison prize for Public Health and Medical Jurisprudence. Candidates must be either Bachelors of Medicine or Bachelors of Science of this University of not more than three years' standing. The prizes will be awarded with the approval of the Senatus for (1st) either (a) Competitive Essays written specially for the prizes, or (b) Theses submitted for Graduation; or (2nd) for original research conducted under supervision of the Professor in the department in which the prize is awarded. The prizes in Anatomy, Chemistry, and Practice of Physic will be awarded in 1893; in Physiology, Botany, Surgery, and Pathology, in 1894; and in Zoology, Materia Medica, Obstetrics, Public Health and Medical Jurisprudence, in 1895. Competitive Essays are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April of the year in which each prize is to be awarded, and the successful competitors will be announced annually at the Graduation Ceremonial in Medicine.

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| 1888. G. A. Stewart, M.A., D.Sc.
(Physiology)
„ E. F. Neve, M.D. (Surgery)
1889. Philip J. White, M.B., C.M.
(Zoology)
„ Joseph Tillie, M.D. (Materia
Medica)
„ Robert Muir, M.B. (Patho-
logy)
1889. James A. Blair, M.B., C.M.
(Public Health and Medi-
cal Jurisprudence) | 1889. John William Ballantyne,
M.D. (Obstetrics)
1890. John Shields, B.Sc. (Che-
mistry)
„ W. G. A. Robertson, M.D.
(Anatomy)
„ Prox. access., A. J. Whiting,
M.B., C.M.
„ Practice of Physic Prize not
awarded
1891. No award |
|---|--|

XXII.—ANDERSON HENRY PRIZE.

The Prize was founded by Isaac Anderson Henry of Woodend, and consists of the proceeds of a sum of £300 accumulated for three years. It is awarded for the best and approved essay on a botanical subject proposed by the Professor of Botany, the Curator of the Royal Botanic Garden, and the President of the Botanical Society of Edinburgh, for competition to students in the Class of Botany in the University of Edinburgh, during any of the three years preceding the date of the award. The next award may be made in August 1893. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before 1st July 1893.

1890. Robert Turnbull, B.Sc.

XXIII.—MILNER FOTHERGILL MEDAL IN THERAPEUTICS.

This Medal, of the value of about £20, is awarded biennially. It is open for competition to Graduates in Medicine of the University, who have been members of the Class of Materia Medica in the University, for the best essay which shall include a description of original research made by the Candidate on a Pharmacological or Therapeutic subject, preference being given to a subject relating to Dietetics. See Deed of Foundation, p. 542 of CALENDAR for 1891-92. The first award may be made at the Graduation Ceremonial in August 1893. Essays to be lodged with the Professor of Materia Medica on or before 30th April 1893.

Of the foregoing Fellowships, Scholarships, Bursaries, and Prizes, the following are open to competition during the Summer Session 1892, and Winter Session 1892-93.¹

¹ N.B.—The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c.

FELLOWSHIPS.¹

1. *The Falconer Memorial Fellowship in Geology and Palaeontology.*—*Competition 25th and 26th July 1892.*—Botany, 25th July, at 1 P.M.; Natural History, 26th July, at 10 A.M., and Geology, at 1 P.M. Names to be given in on or before 1st July. See No. I., p. 533.
2. *The Syme Surgical Fellowship* (No. I. p. 446).
3. *The Leckie-Mactier Fellowship* (No. II. p. 446).
4. *The Freeland Barbour Fellowship* (No. IV. p. 447).

SCHOLARSHIPS.¹

- 1, 2, 3. *Three Vans Dunlop Scholarships.*—One will be awarded for Preliminary Subjects (No. V. p. 449); one will be awarded for Anatomy, Physiology, Materia Medica, and Pathology (No. VIII. p. 450); and one will be awarded for Physiology and Surgery (No. VII. p. 449).
4. *The Murchison Memorial Scholarship in Clinical Medicine* (No. XIII. p. 451).
5. *The Stark Scholarship in Clinical Medicine* (No. XIV. p. 451).
6. *The Buchanan Scholarship in Midwifery and Gynecology* (No. XV. p. 451).
7. *The James Scott Scholarship in Midwifery* (No. XVI. p. 452).
8. *The Ettles Scholarship in Medicine* (No. I. p. 447).
9. *A Hope Prize Scholarship in Chemistry* (No. XVII. p. 452).

BURSARIES.¹

1. *One Sibbald Bursary* (No. II. pp. 453, 454).
- 2-5. *Four Heriot Bursaries* (No. IX. pp. 453, 455).
- 6, 7. *Two Thomson Bursaries* (No. V. pp. 453, 455).
- 8-11. *Four Grierson Bursaries.* Natives of the Parishes of Crawford and Leadhills have a preference. In the absence of preferential Candidates each Bursary will be tenable for one year only, and will be open to competition; one for Preliminary Subjects; one for Chemistry, Botany, and Natural History; one for Anatomy and Physiology; one for Materia Medica and Pathology. The awards for Preliminary Subjects may be made at the beginning of the Session 1892-3. The Examinations for the Second, Third, and Fourth year Bursaries will take place on Saturday, 22nd October 1892 (No. IV. pp. 453, 454).
- 12, 13. *Two Mackie Bursaries* may be awarded at the commencement of the Winter Session 1892-3. Applications to be made to the Dean of the Faculty of Medicine on or before the 1st October 1892 (No. III. p. 453, 454).

¹ For further information, and for information regarding other Fellowships, Scholarships, Bursaries, and Prizes, see under heads of Fellowships, &c.

14, 15. *Two John Aitken Carlyle Bursaries*, one in Anatomy and Chemistry, and one in Anatomy and Physiology (No. VII. pp. 453, 455).

16, 17. *Two Mackenzie Bursaries*, one in the Junior Class of Practical Anatomy, and one in the Senior Class of Practical Anatomy (No. VI. pp. 453, 455).

18. *Renton Bursary* (No. XIII. pp. 453, 456).

Competitors for the above Bursaries, excepting those awarded for the subjects of Preliminary Examination, must have studied the subjects of Examination at the University of Edinburgh. No Fellowship, Scholarship, or Bursary, with the exception of the Ettles Scholarship, can be held along with any other Fellowship, Scholarship, or Bursary.

PRIZES.¹

The Medical Faculty Medals.—Gold Medals are given on the day of Graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

1. *The Beanev Prize in Anatomy, Surgery, and Clinical Surgery* (No. VIII. p. 459).

2. *The Neil Arnott Prize* (No. I. p. 456).

3. *The Cameron Prize* (No. IX. p. 459).

4. *The Gunning Victoria Jubilee Prizes in Anatomy, Chemistry, and Practice of Physic.* Competitive Essays are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April 1893 (No. XI. p. 460).

5. *The Wightman Prize in Clinical Medicine.* Essays to be given in before 6th July 1892 (No. VII. p. 458).

6. *The Dobbie Smith Gold Medal in Botany* (No. X. p. 460).

7. *The Lord Rector's Prize* (No. II. p. 230).

8. *Three Gray Prizes* (No. IV. p. 210).

9. *The Ellis Prize in Physiology* (No. IV. p. 458).

10. *The Milner Fothergill Gold Medal in Materia Medica* (No. XXII. p. 461).

11. *The William Dickson Travelling Fund.* See page 227.

N.B.—*Scholars, Bursars, or Fellows must apply to the Dean of the Faculty of Medicine, for Certificates to entitle them to draw the instalments due, and to the Factor for payment thereof, within three months after they have become payable, otherwise they will be regarded as having resigned. Any who desire to resign must at once announce this to the Dean and to the Factor.*

THOMAS R. FRASER, M.D.,
Dean of the Faculty of Medicine and
Professor of Materia Medica.

¹ See Note 1, page 462.

V.

GRADUATION IN SCIENCE.

Conveners of Science Degrees Committee.

SECTIONS A and B—PROFESSOR CHRYSTAL, LL.D., 5 Belgrave Crescent, Edinburgh.

SECTIONS C, D, E, and F—PROFESSOR GEIKIE, LL.D., F.R.S., &c., 31 Merchiston Avenue, Edinburgh.

Degrees in Science.

Programme of Classes.

SUMMER SESSION, 1892.

The Classes will be opened as follows. They will meet daily (Saturdays excepted), unless otherwise stated; and will be closed on Friday, 22nd July.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.
Elementary Hebrew ¹ ..	2 May, 10 o'clock	{ Prof. Adams and Assistant,	£1 11 6
Elementary Physics (<i>mainly for Students of Medicine</i>).....	} 2 May, 12 ,,	Prof. Tait,.....	3 3
Physical Laboratory ...	2 May, 10 ,,	{ Prof. Tait and Assistant,	2 2
Sanskrit.....	2 May, 3 ,,	Prof. Eggeling, ...	3 3
Engineering Field- Work (Surveying, Levelling, &c.).....	} 14 June, 9.30,,	Prof. Armstrong,	3 3
Geology (<i>Mon., Wed., Fri.</i>).....	} 9 May, 4 ,,	Prof. Geikie,.....	3 3
Field Demonstrations on <i>Saturdays</i> .			
Botany	2 May, 8 ,,	{ Prof. Bayley Balfour,	4 4 ²
Practical Botany.....	2 May, 9 ,,		2 2
Field Demonstrations on <i>Saturdays</i> .			
Natural History.....	2 May, 1 ,,	{ Prof. Ewart,	4 4
Advanced Class	2 May, 3 ,,		2 2
Practical Zoology.....	2 May, 10 ,,		2 2 ³
Advanced Prac. Zool..	2 May, 1.30 ,,	{ Prof. Crum Brown,	3 3 ³
Chemistry (Organic), Advanced Class — (<i>Tues., Wed., & Thur.</i>)	} 3 May, 1 ,,		2 2
Do., Practical.....	2 May, 2 ,,		3 3
Practical Physiology, including Histology	} 2 May, 3 ,,	Prof. Rutherford,	3 3

¹ To prepare Students for entering the Junior Class in Winter Session.

² Besides Garden Fee of 5s. ³ Besides charge of 10s. for Laboratory Expenses.

TUTORIAL CLASSES.

These Classes commence on Monday, 2nd May, and close on Friday, 22nd July.

Classes.	Hours.	Professors' Assistants.	Class Fees.
Senior Humanity.....	9-10	Francis R. Jamieson, M.A.	£2 2
Junior Humanity.....	10-11		
Third Humanity	11-12		
Junior Greek.....	9-10	A. Douglas Thomson, M.A.	2 2
Senior Greek	10-11		
Third Greek.....	12-1		
Junior Mathematics	11-12	R. E. Allardice, M.A.	2 2
Senior Mathematics	12-1		
Advanced Mathematics.	10-11		
Natural Philosophy.....	11-12	William Peddie, D.Sc.	2 2
Analytical Dynamics ...	9-10		
Logic and Psychology. } (Mon., Wed., & Fri.) }	1-2	R. P. Hardie, M.A. (Edin.) B.A. (Oxon.)	1 11 6
Moral Philosophy..... } (Mon., Wed., & Fri.) }	12-1		
		Charles M. Douglas, M.A.	1 11 6

CLASSES.—In the Senior Classes of Greek and Latin, Students are specially prepared for the M.A. Pass Examinations in Classical Literature to be held in October 1892 and April 1893. Most of the prescribed books will be read, and some Lectures will be given on the Literature. This Course may with advantage be taken by those who have attended the Junior Classes and are about to enter the Senior next Winter Session, and by those who have completed the attendance required for the classical part of their Degree, but intend to go up for examination in October instead of April next. The Junior Classes are intended to meet the wants both of the less advanced students who have already attended the Winter Classes, and of those who are preparing to enter on the regular Winter Course for the first time in October next. Part of the work prescribed for the M.A. Pass Examinations in October 1892 and April 1893 will be read, and easier composition will be done. Advanced Classes in Greek and Latin will be formed for the reading of the more difficult authors. These Classes are intended as a preparation for the Advanced Winter Courses. The authors read will be specially selected to suit those preparing for University Scholarship Examinations, and for Classical Honours.

MATHEMATICS.—In the Junior Class of Mathematics the Lectures will be confined to the subjects necessary for the Junior Winter Course, namely, Plane Geometry, and the simpler portions of the Elements of Algebra. The Lectures in the Senior Class, being designed for those who have already attended the Junior Winter Course, or who wish to revise the work of the Senior Winter Course, will embrace Trigonometry, Algebra, and Conic Sections. These Classes afford to Students an opportunity of preparing either for the M.A. Pass or 1st B.Sc. Examination in Mathematics. In the Advanced Class of Mathematics, which has been instituted for the benefit of those preparing to join the Advanced Winter Course, Lectures will be given on Determinants, Theory of Equations, Co-ordinate Geometry, and the Elements of the Differential and Integral Calculus.

NATURAL PHILOSOPHY.—The Course of Lectures on Natural Philosophy will include a treatment of the laws of Heat, Light, Electricity, &c., and of the Elementary Principles of Dynamics. It will be specially adapted to the wants of Students preparing for the 1st B.Sc. or Departmental M.A. Examination in Physics, and for the Natural Philosophy and Mechanics Preliminary Examinations in Medicine and Science. The Advanced Course is intended for Students who are preparing for the Advanced Winter Course, or for the 2nd Science Examinations.

LOGIC AND PSYCHOLOGY.—To prepare for the Class of Logic and Psychology next Session, and for the M.A. Pass and other Examinations. Elements of Logic (Fowler or Jevons). Introduction to Psychology ("Selections from Berkeley," Fourth Edition). "Locke" (Philosophical Classics).

MORAL PHILOSOPHY.—To prepare for the Class of Moral Philosophy, and for the M.A. Pass and other Examinations. Professor's "Handbook"; Sidgwick's "History of Ethics."

RHETORIC AND ENGLISH LITERATURE.—Lectures on the History of English Literature and on the History of the English Language, with special attention to the subjects for the M.A. Examination. A Class for the study of Old English (Anglo-Saxon) and Middle English may also be formed.

ADVANCE CLASSES will be conducted if a sufficient number intimate their intention of joining.

WINTER SESSION, 1892-93.

The classes will be opened as follows, and will meet daily (Saturdays excepted), unless otherwise stated.

Classes.	Days of Opening and Hours of Attendance	Professors.	Class Fees.
First Humanity ... }	19 Oct., 12 & 20 ^{cl.}	Prof. Good-	£3 3
Second Humanity . }	19 Oct., 10 „	hart	3 3
First Greek	19 Oct., 9 & 1 „		3 3
Second Greek	19 Oct., 11 „	Prof. Butcher...	3 3
Third Greek.....	Oct., 2 „		2 2 ¹
First Mathematics	19 Oct., 12 „		3 3
Second Mathematics..	19 Oct., 10 „	Prof. Chrystal...	3 3
Third Mathematics ...	24 Oct., 9 „		3 3
Logic & Psychology...	19 Oct., 1 „		3 3
Metaphysics and Hist. of Philos. }	3 Nov., 3 „	Prof. Seth.....	2 2 ²
(Mon. and Thurs.) }			
Moral Philosophy....	19 Oct., 12 „		3 3
Do. Advanced.... }	1 Nov., 3 „	Prof. Calder-	2 2 ²
(Tues. & Fri.).... }		wood	
Natural Philosophy...	19 Oct., 11 „		3 3
Do. (Advanced Class)	31 Oct., 10 „	Prof. Tait.....	3 3
Physical Laboratory .	7 Nov., 10 „		2 2
Practical Astronomy ⁵	27 Oct., 11 „	Prof. Copeland..	3 3
Agriculture and }	26 Oct., 9 „	Prof. Wallace ...	4 4
Rural Economy.. }			
Hebrew—Junior Class ⁵	2 Nov., 1 „		3 3
Do. Senior Class ⁵	2 Nov., 2 „		3 3
Arabic and Aramaic }	9 Nov., 3 „	Prof. Adams....	3 3
(Mon., Wed., & }			
Fri.)..... }			
Sanskrit and Compa-			
rative Philology— ⁵			
(Junior Class).....	3 Nov., 3 „	Prof. Eggeling	4 4
(Senior Class).....	3 Nov., 4 „		4 4
Engineering	3 Nov., 9 „		4 4
Do., Short Addi-	11 Jan., 1 „		1 1 ^{3,4}
tional Course... }			
Geometrical & Me-	4 Nov., 10 to 2 „	Prof. Armstrong	3 3
chanical Drawing. }			
Sanitary Engineer }	9 Nov., 10 „		3 3
ing and Drawing }			

¹ The fee is £3, 3s. for those who have not previously attended the Greek Classes qualifying for graduation.

² For those only who have previously attended the Junior Class.

³ Five Shillings University Entrance Fee for non-matriculated Students.

⁴ No fee for Students of the regular Class in Engineering.

⁵ This Course will also qualify for Graduation in Arts, as soon as the new Ordinances come into operation.

WINTER SESSION, 1892-93—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors.	Class Fees.
Geology & Mineralogy ¹ (<i>Mon., Wed., & Fri.</i>)	2 Nov., 4 o'cl.	Prof. Geikie....	{ 4 4
Practical Class (<i>daily</i>)	4 Nov., 3-4 ,,		{ 2 2
Economics as applied to Agriculture (Biennially) (<i>Mon., Wed., & Fri. till Christmas</i>)	31 Oct. 3 ,,	Prof. Nicholson	1 1
Chemistry	11 Oct., 10 o'cl.	Prof. Crum Brown	{ 4 4
Practical Chemistry {	1 Dec., 11 and 2 o'cl.		{ 3 3
Institutes of Medicine	11 Oct., 10 ,,	Prof. Rutherford.	{ 4 4
Practical Physiology..	12 Oct., 1 ,,		{ 3 3
Natural History ²	11 Oct., 12 ,,	Prof. Ewart.....	{ 4 4
Advanced Class ²	11 Oct., 3 ,,		{ 2 2
Practical Zoology ²	11 Oct.,		{ 2 2 ³
Advanced Prac. Zool. ²	12 Oct.,		{ 3 3 ³
Public Health Lectures	25 Jan. 3 ,,	Prof. Sir Douglas MacLagan	
Botany ²	11 Oct.,	Prof. B. Balfour.	{ 4 4 ⁴
Prac. Bot. Element. ²	11 Oct.,		{ 2 2
Do. do. Advanced ²	11 Oct.,		{ 3 3

LECTURERS.

Forestry	26 Oct., 4 o'cl.	Col. F. Bailey, C. E.	3 3 ⁵
Agricultural Entomology (Twenty Lectures).....	5 Jan., 2 ,,	{ W. Fream, LL. D., B.Sc. (Lond.) }	{ 2 2 ^{5 6}
Compar. Embryology	4 Jan., 2 ,,	Mr George Brook	3 3 ⁵

The Fee for a Second Course of any of the Lectures is £3, 3s. ; any subsequent course is free. If a Perpetual Ticket is taken out at the beginning of the First Course, the Fee is £6, 6s.

¹ This Course will also qualify for Graduation in Arts, as soon as the new Ordinances come into operation.

² Three months' course.

³ Besides charge of ros. for Laboratory Expenses.

⁴ Besides Garden Fee of Five Shillings.

⁵ Five Shillings University Entrance Fee for Non-Matriculated Students.

⁶ Free to all present and past Students of the Agriculture Class.

The following means are afforded for Practical Instruction:—

I. LABORATORIES.

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

GEOLOGICAL AND PETROLOGICAL LABORATORY, for practical instruction in the study of Minerals, Rocks, and Fossils, and the methods of plotting and drawing geological maps and sections, is open daily from 3 to 4, under the superintendence of Professor Geikie.

ENGINEERING DRAWING CLASS ROOM, open daily during the Winter Session, from 10 A.M. to 2 P.M., for practical instruction in drawing and drawing office routine.

THE ENGINEERING (FULTON) LABORATORY, open on fixed days during the Winter Session, for the practical instruction of Students in the processes employed by the Engineer in the Experimental Determination of the Physical and Economical Constants of Materials, Machines, and Prime Movers, and in the Practical Applications of Electricity.

PRACTICAL INSTRUCTION IN OFFICE AND FIELD-WORK, daily, in connection with the Summer Course of Lectures on Surveying, Leveling, &c., from 11 A.M. to 4 P.M. each day.

The AGRICULTURE DEPARTMENT in the Museum of Science and Art is open daily to Students attending the Agriculture Class. Excursions to farms are made on Saturdays by Members of the Agriculture Class, and demonstrations are given from time to time in the Agriculture Laboratory. The leading agricultural newspapers are left for the use of Students in the Agriculture Lecture Room.

The ROYAL OBSERVATORY is open to Students of Practical Astronomy on two evenings of the week, from 8 P.M.

ROYAL BOTANIC GARDEN and BOTANICAL MUSEUM AND LABORATORY.—These, as well as the Herbarium, with which is incorporated the Collection of dried plants belonging to the University, are used by University Students for the practical study of plants and for botanical research, and are open daily.

PHYSIOLOGICAL LABORATORY, for the prosecution of Physiological Research, and for the study of Practical Physiology, open daily, under the superintendence of the Professor, assisted by E. W. Carrier, M.D., B.Sc., and A. J. Whiting, M.B.

The CHEMICAL LABORATORIES (distinct from the Practical Chemistry Room), completed in 1885, contain accommodation for forty Students. The Laboratories, which are fitted with all necessary apparatus for chemical analysis and research, are open daily, under the superinten-

dence of the Professor, assisted by John Gibson, Ph.D. ; James Walker, D.Sc., Ph.D. ; and Theodore Rettie, B.Sc.¹

NATURAL HISTORY LABORATORIES, for research and for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the superintendence of the Professor, assisted by J. Beard, B.Sc., Ph.D.¹

PUBLIC HEALTH LABORATORY, for Hygienic investigation, comprises three departments, viz.: a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the superintendence of the Professor, assisted by Charles Hunter Stewart, M.B., C.M., B.Sc. Opens 2nd May and 3rd October 1892.¹

EMBRYOLOGICAL LABORATORY, for research and for study of the development of Vertebrate and Invertebrate types, open daily under the superintendence of the Lecturer.

MATRICULATION FEES.

For the Academical Year, 1st October to 1st October,	. £1 0 0
For the Summer Session only, 1st May to 1st October,	. 0 10 0
University entrance-fee in lieu of Matriculation for each of certain additional Courses (see Class Lists),	. . 0 5 0

CLASS SESSIONS.

There are Two Sessions in each year, viz. :—

I. The Summer Session, which opens on the 2nd of May, and closes on the 22nd of July 1892.

II. The Winter Session, which opens on the 11th of October 1892, and closes on the 30th March 1893. Practical Anatomy and Public Health Laboratory work begin on the 3rd of October 1892.

The Classes will meet for the last time before the Christmas Vacation on Wednesday, 21st December 1892, and will re-assemble on Wednesday, 4th January 1893.

Regulations as to Degrees.

Two Degrees in Science are conferred by the University of Edinburgh :—that of Bachelor of Science (B.Sc.), which is conferred in the Departments of Physical and Natural Science (Section C), in Engineering (Section D), in Public Health (Section E), and in Agriculture

¹ Fees—Winter Session, £10, 1cs.; S mmer Session, £6, 6s.

(Section F); and that of Doctor of Science (D.Sc.), which is conferred in the Departments of Mental Science (Section A), and Philology (Section B), and in the above-mentioned Sections C, D, and E.

The Degrees in Science are conferred at the Graduation Ceremonials in April and August. [*Note*.—The Ordinance of the Scottish Universities Commissioners of 1889, No. 12 (General No. 7—Regulations for Degrees in Science),¹ may come into operation in October 1892.]

A.—DOCTORATE IN MENTAL SCIENCE.

The Degree of Doctor of Science is open to Candidates highly prepared in the Mental Sciences.

1. The Candidate must be a Graduate, by examination, of a British or a recognised Indian or Colonial University.

2. He must be matriculated in this University for the year in which he appears for Examination or Graduation.

3. He must have attended for at least one academic year in this University, and during that year he must have taken at least two classes on the subjects embraced in the Examination.

4. The Candidate must, in evidence of literary and philosophical culture, send to the Dean of the Faculty of Arts, *at least one month* before proceeding to Examination, a Thesis giving evidence of original research, on a subject in Mental Science approved, *six months before the examination*, by the Science Degrees Committee. Mere compilations will not be accepted. The Candidate can be admitted to examination only after this Thesis has been found satisfactory by the Examiners.

5. The Candidate may then proceed to the Examination, which shall include Logic and Metaphysics, Moral Philosophy, and the History of Philosophy, both Metaphysical and Moral; and the Examination shall (as far as convenient) be combined with the examination for Honours in Philosophy of the year in which the Candidate desires to pass, and including the books and subjects embraced in that Examination. [Candidates may be tested both orally and by writing.]

6. Those who have taken the Degree of Master of Arts in this University with First-Class Honours in the Department of Mental Philosophy, may obtain the Degree of Doctor in Mental Science when a period of *not less than five years* shall have elapsed after they have obtained such Honours, on submitting a sufficient Thesis, on a subject approved by the Science Degrees Committee, and on giving such other evidence of increased proficiency in the Mental Sciences, by published writings or otherwise, as may be satisfactory to the Senatus.

7. The Fee for the Degree of Doctor in Mental Science is £7, 7s.²

¹ See proposed new Ordinance, Appendix, p. 30.

² Every candidate, unless a member of the General Council, is required by Act of Parliament to pay the Registration Fee of £1 before graduation.

The Fee must be paid at the *Matriculation Office* at least ten days before the Examination (or in the case of Candidates admitted under Rule 6, at least ten days before Graduation), when the Diploma and Certificates of the Candidate must be shown to the Dean of the Faculty of Arts. In the event of the Candidate not passing, the fee is not returned, but he may appear at *one* subsequent Examination without paying an extra fee, and at any future Examination on paying one-half of the fee. See pages 499 and 500 as to payment of fees.

B.—DOCTORATE OF SCIENCE IN PHILOLOGY.

The Degree of Doctor of Science is open to Candidates highly proficient in Philology.

1. The Candidate must be a Graduate, by examination, of a British or recognised Indian or Colonial University.

2. He must be matriculated in this University for the year in which he appears for Examination or Graduation.

3. He must have attended for at least one academic year at this University, and during that year he must have taken at least two classes on the subjects embraced in the Examination.

4. The Candidate must send to the Dean of the Faculty of Arts, *at least one month* before proceeding to Examination, a Thesis, giving evidence of original research, on some subject in Philology or Archaeology, approved *six months before the examination* by the Science Degrees Committee. Mere compilations will not be accepted. The Candidate can be admitted to examination only after this Thesis has been found satisfactory by the Examiners.

5. The Candidate may then offer himself for Examination in any one of the following branches :—

(1.) *Latin and Greek Languages.* Candidates for the Degree of Doctor of Science in Classical Philology will be tested in respect of their general Scholarship by translation from Latin and Greek Authors, and by composition in Latin and Greek Prose. They will further be required to profess a special knowledge of some Department or Epoch of Classical Literature, or of some three or four of the more difficult and important Classical Writers.

(2.) *Semitic Languages.*

The following are the subjects of Examination for the Degree in this Department :—

(a.) Hebrew.—The Books of Samuel, Kings, Psalms, Amos, Micah, and Zechariah to be known critically. Hebrew prose composition.

(b.) Aramaic.—The Aramaic portions of the Old Testament. The Chrestomathy in Nestle's Syriac Grammar. The Biblical Extracts and the Selections from the Chronicle of Bar-Hebraeus and from Ephraem's Hymns in Roediger's

Chrestomathia Syriaca. The First Gospel and the Book of Acts (Peshittâ Version). The Fourth Gospel (Philoxenian Version). Translation into Syriac.

(c.) Arabic.—The *Ḳor'ân*, *Sûras* i.-vi., x.-xv., xxvii.-xxxii., xxxv., xxxvi., and lxxviii.-lxxx., with Sale's Preliminary Discourse. Reading of easy Arabic Prose. Translation into Arabic.

(3.) *Sanskrit Language and Comparative Philology.*

(a.) Sanskrit Language and Literature. Translation of passages from standard Sanskrit Authors into English, and of moderately difficult passages from English into Sanskrit.

(b.) Science of Language, and Comparative Philology of the Indo-European Languages. Acquaintance with the principles of Comparative Linguistic Research, as laid down in the Comparative Grammar of Bopp, Schleicher's "Compendium," and Müller's and Whitney's "Lectures." Candidates must also show some degree of familiarity with Curtius' "Principles of Greek Etymology" (the Introduction); Peile's "Introduction;" Delbrück's "Introduction to the Study of Language;" and Brugmann's "Elements of Comparative Philology."

[The Examinations will be held annually at the close of the Winter Session. Candidates may be tested both orally and by writing.]

6. Those who have taken the degree of Master of Arts in this University, with First-Class Honours in the Department of Classical Literature, may obtain the Degree of Doctor of Science in Philology, when a period of *not less than five years* shall have elapsed after they have obtained such Honours, after submitting a sufficient Thesis on a subject approved by the Science Degrees Committee, and on giving such other evidence of increased proficiency in Philological Research, by published writings or otherwise, as may be satisfactory to the Senatus.

7. The Fee for the Degree of Doctor of Science in Philology is £7, 7s.¹ The Fee must be paid at the *Matriculation Office* at least ten days before the date of Examination (or in the case of Candidates admitted under Rule 6, at least ten days before Graduation), when the Diploma and Certificates must be shown to the Dean of the Faculty of Arts. In the event of the Candidate not passing, the fee is not returned, but he may appear at *one* subsequent Examination without paying an extra fee, and at any future Examination on paying one-half of the fee.

Friday, 7th April 1893, at 9 o'clock, is fixed for the commencement of the Examinations of Candidates for the Degree of Doctor in Mental Science, and of Doctor in Philology,—either in Latin and Greek, or in Sanskrit and Comparative Philo-

¹ Every Candidate, unless a member of the General Council, is required by Act of Parliament to pay the fee of £1 for Registration before graduation.

logy. The Examination in Semitic Philology will be held on Tuesday, March 21, 1893, and following days.

Candidates must present their Theses to the *Dean of the Faculty of Arts* at least one month before the date of the Examination. They must also enter their names and addresses and pay the fees at the "*Matriculation Office, University, Edinburgh.*" See pages 499 and 500 as to payment of fees.

G. CHRYSTAL, LL.D., *Convener.*

C.—DEGREES OF BACHELOR AND DOCTOR OF SCIENCE, IN THE DEPARTMENT OF PHYSICAL AND NATURAL SCIENCE.

QUALIFICATIONS REQUIRED OF CANDIDATES.

PRELIMINARY EXAMINATIONS.

1. Candidates for Degrees in Physical and Natural Science must, unless exempted, pass a Preliminary Examination in English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and in at least two of the following subjects:—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, and Moral Philosophy. This Preliminary Examination is the same as for Degrees in Medicine. See pp. 356, 366-368.

EXEMPTIONS FROM THE PRELIMINARY EXAMINATION.

- (a.) Bachelors or Masters of Arts, by Examination, of British or recognised Indian or Colonial Universities.
- (b.) Bachelors or Doctors of Medicine of British or recognised Indian or Colonial Universities.
- (c.) Holders of two Departmental Certificates in the Faculty of Arts of this University.
- (d.) Candidates who have passed in this University the Entrance Examination for Curriculum of Three Sessions for Degrees in Arts in Latin, Greek, and Mathematics, are exempted from the Preliminary Examination in Latin, Arithmetic, and Elements of Mathematics, and are held to have passed in Greek and Higher Mathematics as optional subjects.
- (e.) Matriculated Students of the University of London.
- (f.) Students who have been admitted by Examination to the Royal

Indian Engineering College, Cooper's Hill, and who have obtained 50 per cent. of the marks in Latin or in Greek in the Competitive Examination for entrance to that College. Should such Students not bring evidence of having obtained 50 per cent. in either of these subjects, they will be required to pass the Preliminary Examination in Latin.

- (g.) Holders of Certificates of having passed the Leaving Examinations of the Universities of Oxford and Cambridge when certified as equivalent to a pass in Responsions at Oxford and the First Examination at Cambridge.

2. Candidates must also produce evidence of attendance on qualifying Classes embracing all the subjects included in the Science Examination which they purpose to undergo.

3. The attendance on Science Classes for the Degree of Bachelor of Science must extend over three Academic years, one of which must be passed at the University of Edinburgh, the other two years either at this University, or at Universities or Institutions¹ recognised by and approved by this University; Classes of Chemistry, of Practical Chemistry, of Botany, and of Zoology, which are recognised for the First Professional Examination for Degrees in Medicine, are also recognised for the First Bachelor of Science Examination.

4. Each Academic year must be constituted by attendance on Science Classes during at least two full courses during one winter session, or one such course and two full courses during a summer session. Work in a scientific laboratory extending over a period of not less than five months will be reckoned equivalent to a full winter course of lectures, and work in a scientific laboratory extending over a period of three months will be reckoned equivalent to a full summer course of lectures.

5. Every Candidate for a Degree in Science must produce his Matriculation Ticket for the year in which he appears for Examination or Graduation.

6. Candidates for Graduation who have previously passed the Examinations are required to intimate to the Clerk to the Senatus their intention to Graduate, and pay the fee at least ten days before the date of Graduation. Those whose Examina-

¹ Only Institutions possessing the necessary staff and appliances for Theoretical and Practical Instruction in Science will be recognised by the University. A list of Universities and Institutions at present recognised in terms of this regulation is given next page, 478.

tions are not then completed are required to give such intimation at the earliest possible date, and at latest one clear day before the day of Graduation.

UNIVERSITIES and INSTITUTIONS at present recognised in Terms of Regulation I. 3.

The Universities of St Andrews, Glasgow, Aberdeen, Oxford, Cambridge, Dublin, and Victoria University, Manchester.

The Glasgow and West of Scotland Technical College ; University College, Dundee ; University College, London ; King's College, London ; The Royal College of Science, South Kensington ; The Owens College, Manchester ; The Mason College, Birmingham ; The College of Science, Newcastle-on-Tyne ; The Yorkshire College of Science, Leeds ; University College, Bristol ; University College, Liverpool ; The Firth College, Sheffield ; University College, Nottingham ; The University College of North Wales, Bangor ; University College of Wales, Aberystwith ; The University College of South Wales and Monmouthshire ; The Engineering College, Cooper's Hill.

The Queen's College, Belfast ; The Queen's College, Cork ; The Queen's College, Galway ; The College of Science, Stephen's Green, Dublin ; The School of Mines, Dublin.

The Presidency Colleges in Calcutta, Madras, and Bombay. The Thomasson Engineering College, and The Engineering College, Poona.

M'Gill University, Montreal ; The University College of Toronto ; Queen's University, Kingston, Ontario ; The University of Sydney ; The University of Melbourne ; and The University of Adelaide ; Wellington College ; The University of Otago ; Dalhousie College, Halifax, Nova Scotia ; Stellenbosch College, South Africa.

The University of Harvard ; The University of Yale ; The John Hopkins University.

The Universities, and Polytechnic Schools supported and regulated or recognised by the governments of the respective Countries of Europe.

EXAMINATIONS.

For the Degree of Bachelor of Science, there are two Examinations, conducted by written questions, as well as orally and practically.

(a.) FIRST BACHELOR OF SCIENCE EXAMINATION.

1. The First Examination for B.Sc. is as to the general knowledge of the Candidate on the following subjects. viz. :—

MATHEMATICS.	ZOOLOGY, including COM-
NATURAL PHILOSOPHY.	PARATIVE ANATOMY.
CHEMISTRY.	BOTANY.

2. The Examinations in Mathematics and Natural Philosophy take place on the days announced for these subjects in the *Regulations for Graduation in Arts*.

3. The Examinations in Chemistry, Zoology, and Botany take place at the same time as the examinations on these subjects announced in the *Regulations for Graduation in Medicine*.

4. Candidates may appear for this Examination at the first period of Examination subsequent to their attendance on the necessary classes. It may be taken at one period, or at separate periods: Mathematics and Physics must be taken together; Chemistry, Zoology, and Botany may be taken together or in the following alternative subdivisions, namely—(a) Botany and Natural History, (b) Chemistry (including Practical Chemistry), (c) Botany and Chemistry (including Practical Chemistry), or (d) Natural History and Chemistry (including Practical Chemistry), at the first period of examination after they have completed attendance on the relative classes; and may proceed to examination in the remaining subject or subjects at a subsequent period of examination.

5. Masters of Arts who have taken honours in the Natural Sciences after passing the Examinations for M.A. in this University are exempted from the First Bachelor of Science Examination.

6. Holders of departmental certificates in the Department of Mathematics in this University are exempted from Examination in Mathematics and Natural Philosophy.

7. Candidates who have passed the First Professional Examination for Degrees in Medicine in this University are exempted from Examination in Chemistry, Zoology, and Botany.

(b.) SECOND BACHELOR OF SCIENCE EXAMINATION.

1. The Second B.Sc. Examination is divided into the following groups, one of which must be professed by the candidate :—

- | | |
|--|--|
| (a.) THE MATHEMATICAL SCIENCES, ... | { Higher Mathematics,
Natural Philosophy. |
| (b.) THE PHYSICAL EXPERIMENTAL SCIENCES, ... | { Experimental Physics,
Chemistry. |
| (c.) THE NATURAL SCIENCES, ... | { Zoology, Botany, Phy-
siology, Geology. |

2. The Examinations in the first two of these departments will take place at the same time as the Examination for the Degree of M.A., with Honours, and in the third, at the same time as the Examination for the First M.B. Professional Examination.

3. Candidates may proceed to the Second B.Sc. Examination at the next periodical Examination after passing the First.

4. Candidates who have passed the First B.Sc. Examination, and have taken Honours in the Department of Mathematics for the Degree of M.A. in this University, are exempted from the Second B.Sc. Examination in the Department of the Mathematical Sciences.

5. A Candidate who has passed the First and Second B.Sc. Examinations, and otherwise complied with the Regulations for Graduation, will be recommended to the Senatus for that Degree, which will be conferred at one of the usual times appointed for giving Degrees, on the Candidate giving at least one day's notice of his intention to graduate.

(c.) DOCTOR OF SCIENCE EXAMINATION.

1. Candidates may present themselves for the D.Sc. Examination twelve months after passing the Second B.Sc. Examination.

2. A Candidate for the Degree of D.Sc. must profess one of the following branches of Science, viz. : Mathematics, Natural Philosophy, Chemistry, Zoology and Comparative Anatomy, Botany, Animal Physiology, Geology, including Palæontology, and in it he will be expected to show a thorough knowledge.

3. He must submit a Thesis containing either an account of original work done by him, or historical or critical research connected with the special subjects of his Examination. The Thesis must be approved before the candidate is allowed to proceed to Examination.

The Thesis must be sent to the Convener of the Science Degrees Committee on or before 30th April in the year in which the Candidate proposes to graduate.

4. The Degree of D.Sc. will not be conferred on any Candidate who has not completed his 21st year.

OUTLINE OF SUBJECTS OF EXAMINATION FOR DEGREES IN SCIENCE.

FIRST BACHELOR OF SCIENCE EXAMINATION.

1. MATHEMATICS.
2. NATURAL PHILOSOPHY.

The Examinations in these subjects are the same as those for the Degree of M.A. in the Department of Mathematics (p. 117).

3. CHEMISTRY.
4. ZOOLOGY AND COMPARATIVE ANATOMY.
5. BOTANY.

The Examinations in these subjects are the same as those for the First Professional Examination in Medicine (see pp. 374, 375).

SECOND BACHELOR OF SCIENCE EXAMINATION.

(a.) THE MATHEMATICAL SCIENCES.¹

The Examination is the same as for the Degree of M.A. with Honours in Mathematics (see p. 121).

(b.) THE PHYSICAL EXPERIMENTAL SCIENCES.

1. EXPERIMENTAL PHYSICS.

Candidates will be required to show considerable knowledge of the processes required for the determination of physical constants—such as, for instance, *the Specific Heat, the Specific Inductive Capacity, the Thermal and Electric Conductivity of a substance; the Velocity of Light, or of Sound; the Magnetic Dip, Variation, and Horizontal Intensity, &c., &c.*

2. CHEMISTRY.

Inorganic Chemistry.

Organic Chemistry.

Relation between Chemical and Physical Properties.

Complex Qualitative Analysis, Simple Quantitative Determinations, and the preparation of pure reagents. [*This part of the Examination will be conducted practically.*]

(c.) THE NATURAL SCIENCES.

1. ZOOLOGY AND COMPARATIVE ANATOMY.

(a.) A fuller knowledge of the Principles of Biology and of Systematic Zoology than is required for the 1st B.Sc. Examination, together

¹ Candidates who have passed the First B.Sc. Examination, and have passed in the Department of Mathematics for the M.A. Degree with Honours, will be held, on paying the fee, to have passed the Second B.Sc. Examination in the Department of the Mathematical Sciences.

with the Elements of the Comparative Anatomy of the Invertebrata and Vertebrata.

(b.) The Anatomy and Comparative Histology of *Actinophrys*, *Actinosphaerium*, *Thalassicolla*, *Collozoum*, *Vorticella*, *Podophrya*, *Stentor*, *Grantia*, *Halisarca*, *Campanularia*, *Hydractinia*, *Cordylophora*, *Aurelia*, *Actinia*, *Alcyonium*, *Beroë*, *Asterias*, *Echinus*, *Cucumaria*, *Antedon*, *Amphiporus*, *Clepsine*, *Sipunculus*, *Lumbricus*, *Aphrodite*, *Nereis*, *Notomastus*, *Polyophthalmus*, *Sagitta*, *Balanoglossus*, *Lepas*, *Cancer*, *Peripatus*, *Bombyx*, *Mygale*, *Pecten*, *Doris*, *Arion*, *Patella*, *Buccinum*, *Aplysia*, *Phyllirrhoe*, *Loligo*, *Ascidia*, *Amphioxus*, *Myxine*, *Petromyzon*, *Raja*, *Pleuronectes*, *Triton*, *Testudo*, *Lacerta*, *Tropidonotus*, *Lepus*.

(c.) The Anatomy of the Skeletal Structures of:—*Halichondria*, *Euplectella*, *Hyalonema*, *Campanularia*, *Sertularia*, *Stylaster*, *Millepora*, *Antipathes*, *Caryophyllia*, *Fungia*, *Gorgonia*, *Corallum*, *Tubipora*, *Flustra*, *Spatangus*, *Synapta*, *Serpula*, *Terebratula*, *Nautilus*, *Argonauta*, *Spirula*, *Chiton*, *Lepidosteus*, *Acipenser*, *Chimæra*, *Protopterus*, *Menopoma*, *Monitor*, *Python* and *Naja* (skulls only), *Crocodylus*, *Struthio*, *Echidna*, *Ornithorhynchus*, *Thylacinus* (skull only), *Phocaena*, *Felis tigris* (skull only), *Cervus*, *Canis*, *Sus*, *Equus*, *Mus*, *Erinaceus*, *Vampyrus*, *Mycetes* (skull only), *Macacus* (skull only), *Troglodytes*, *Homo*, also of the extinct forms *Archæopteryx*, *Ichthyornis*, *Hesperornis*, *Dinornis* and *Campsognathus*.

(d.) The external characters and appendages of *Apis*, *Scolopendra*, *Julus*, *Scorpio*, *Epeira*, *Gammarus*, *Oniscus*, *Apus*, *Birgus*, *Pagurus*, *Mysis*, *Pycnogonum*, *Palæmon*, *Limulus*, *Musca*.

(e.) Development and Life History of *Paramœcium*, *Dicylema*, *Spongilla*, *Sycandra*, *Velella*, *Physophora*, *Yungia*, *Aspidogaster*, *Archigetes*, *Tænia*, *Lineus*, *Rhabditis*, *Echinorhynchus*, *Trochosphaera*, *Lopadorhynchus*, *Nais*, *Bonellia*, *Phoronis*, *Sagitta*, *Echinus* (and the various forms of Echinoderm larvae), *Periplaneta*, *Cyclops*, *Penæus*, *Mysis*, *Squilla*, *Sacculina*, *Mytilus*, *Lymnæus*, *Appendicularia*, *Pyrosoma*, *Salpa*, *Clupea*, *Gallus*, *Lepus*, and also of the forms in italics in section b.

(f.) A knowledge of the principles of distribution and classification, and of the theory of Natural Selection.

(g.) Candidates will be required to prepare and mount specimens for microscopic examination.

II. ANIMAL PHYSIOLOGY.

The whole of Human Physiology, including the minute structure of the various Tissues and Organs.

The Comparative Physiology of the Brain and Spinal Cord in Vertebrates.

The Candidate will be expected to prepare specimens for the microscope, and to describe them; to perform operations in Physiological Chemistry, and to be acquainted with the principal apparatus and the

arrangements of the chief experiments connected with physiological investigations.

Text-Books.—Text-Book of Physiology by Kirkes, or that by Foster ; Practical Physiology, by Stirling.

III. BOTANY.

I.—MORPHOLOGY.

I. (a.) General :—Doctrine of the Cell ; its historical development. Structure of the Cell ; its forms and patterns. Protoplasm, the nucleus and nucleolus, plastids. Substances in protoplasm. Forms of cell-formation. Tissues, their kinds and formation. Primary disposition of tissues. Secondary changes in tissues and growth in thickness. Differentiation of the plant into members, the relationships of the members, their development. Branching, its forms. Metamorphosis of members, and the spiral theory. Special features of the flower ; its development. Fruits, their forms and development. Buds and their modifications ; their development. Hairs. Sporangia and their modifications and development. The Seed, its structure and development. Sexual organs, their forms and development.

(b.) Special (1)—The principal facts in the life history of the following :—Gomphonema, Fuligo, Protococcus, Nostoc, Bacterium, Vaucheria, Pandorina, Pediastrum, Oedogonium, Coleochaete, Spirogyra, Closterium, Chara, Laminaria, Fucus, Polysiphonia, Nemalion, Dudresnaya, Batrachospermum, Corallina, Protomyces, Entyloma, Mucor, Pythium, Saprolegnia, Podosphaera, Eurotium, Penicillium, Polystigma, Xylaria, Claviceps, Ascobolus, Tuber, Saccharomyces, Collema, Usnea, Parmelia, Puccinia, Endophyllum, Agaricus, Phallus, Anthoceros, Radula, Riccia, Marchantia, Sphagnum, Andreaea, Funaria, Polytrichum, Hymenophyllum, Aspidium, Osmunda, Salvinia, Pilularia, Marsilea, Isoetes, Ophioglossum, Marattia, Equisetum, Lycopodium, Selaginella, Cycas, Pinus, Taxus, Avena, Scilla, Drocena, Orchis, Ulmus, Digitalis, Helianthus, Vicia, Capsella. Details not of obvious significance from the point of view of Comparative Morphology, will not be required.

(2) The flower and fruit characters of the following Natural Orders :—Coniferae, Cycadaceae, Gramineae, Cyperaceae, Alismaceae, Aroideae, Palmae, Juncaceae, Liliaceae, Amaryllideae, Iridae, Scitamineae, Orchideae, Salicineae, Cupuliferae, Urticeae, Euphorbiaceae, Lorantheae, Thymeleaceae, Polygonaceae, Chenopodiaceae, Labiatae, Acanthaceae, Scrophularineae, Solanaceae, Convolvulaceae, Boragineae, Polemoniaceae, Gentianeae, Asclepiadeae, Apocynaceae, Primulaceae, Ericaceae, Vacciniaceae, Campanulaceae, Compositae, Dipsaceae, Valerianae, Rubiaceae, Caprifoliaceae, Umbelliferae, Cactae, Cucurbitaceae, Myrtaceae, Saxifragaceae, Rosaceae, Leguminosae, Sapindaceae, Rhamnaceae, Illicineae, Rutaceae, Geraniaceae, Lineae, Tiliaceae, Malvaceae, Hypericineae, Caryophyllae, Polygaleae, Violariaceae, Resedaceae, Cruciferae, Papaveraceae, Nymphaeaceae, Berberideae, Ranunculaceae.

Candidates will be expected to be able to draw floral diagrams showing the relations of parts of the flowers in those orders, and to be acquainted with the theoretical explanations of the more important anomalous and divergent types belonging to them. This section, 2, will be especially dealt with in the practical examination, and need not form part of the written examination.

2.—TAXONOMY.

Principles of plant classification. The History of its development and the influence upon it of the dogma of the constancy of species, and of descent. The methods associated with the names of—Cesalpino, Ray, Linnaeus, de Jussieu, de Candolle, Brown, Hofmeister, Hooker.

3.—DISTRIBUTION.

The elements which determine distribution and dispersion of plants. The leading facts of geographical distribution. Theories of Insular and mountain Floras. The leading facts of palaeophytology, and their bearing on the theory of descent.

4.—PHYSIOLOGY.

Sustentative function of plants. Materials of plant food, their sources. Absorption of food material; its synthesis and distribution in the plant. Parasitism. Saprophytism. Metabolism. Vegetable digestion and assimilation. Respiration. Transpiration. Movement of gases and liquids in plants. Growth. Properties of growing parts. Conditions requisite for and affecting growth. Germination. Correlation of growth. Irritability and Contractility of protoplasm. The adaptation of tissues and members to function. Reproductive function of plants; History of the subject. Agamogenesis and Gamogenesis. Embryogeny. Alternation of generations. Apogamy and Parthenogenesis; Apospory. Self and Cross fertilisation and the theory of fertilisation. Hybridism. Variation. Heredity. Special phenomena in flowering plants.

The following English books are recommended :—De Bary's "Comparative Anatomy of the Vegetative Organs of the Phanerogams and Ferns"; Gocbel's "Outlines of Classification and Special Morphology of Plants"; Sachs' "Lectures on the Physiology of Plants"; De Bary's "Comparative Morphology and Biology of Fungi, Mycetoza, and Bacteria"; De Bary's "Lectures on Bacteria"; Sachs' "History of Botany"; Solms' "Fossil Botany"; Hooker's "Descriptive and Analytical Botany of Le Maout and Decaisne."

IV. GEOLOGY, INCLUDING PALÆONTOLOGY AND MINERALOGY.

Physical Geography, Meteorology, and Dynamical Geology—The nature and operation of Geological agents: Rain, Rivers, Ice, the Sea, Earthquakes, Volcanoes, Movements of Upheaval and Depression.

Mineralogical and Petrological Geology—Characters of Rock-forming Minerals : Macroscopic and Microscopic Characters, Composition, Origin and Distribution of Rocks.

The *Structural Geology*—Structure of Rock-masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformability, Denudation.

Stratigraphical Geology—The History of the Geological Formations of the British Islands.

Palæontological Geology—Characters, and distribution in time, of the more important Genera and Orders found fossil in Britain.

DOCTOR OF SCIENCE EXAMINATION.

I. MATHEMATICS.

The candidate will be required to show very high attainments in two at least of the following subjects :—

1. Pure Geometry, including Modern Geometry and Trigonometry.
2. Analytical Geometry.
3. Algebra, including Higher Algebra and the Theory of Numbers.
4. The Differential and Integral Calculus generally.
5. Special departments, such as the Calculus of Variations, Quaternions, &c.

II. NATURAL PHILOSOPHY.

Candidates who select Physics or Applied Mathematics are required to pass a searching examination in one of the following nine subjects or groups of subjects, and to shew more than a mere elementary knowledge of at least two others :—

(A.) APPLIED MATHEMATICS.

1. *Abstract Dynamics*, including *Kinematics*.
2. *Acoustics* and *Theory of Light*.
3. *Conservation of Energy* including the *Dynamical Theory of Heat*.
4. *Electricity*, including the mathematical theories of *Static and Voltaic Electricity*, *Induction*, *Magnetism*, and *Electro-Magnetism*.
5. *Physical Astronomy*, including the *Lunar and Planetary Theories*, the *Figure of the Earth*, *Precession*, and *Nutation*.

(B.) EXPERIMENTAL PHYSICS.

6. *Properties of Matter*.
7. *Sound and Light*.
8. *Heat and Energy* (generally).
9. *Electricity, Magnetism, &c.*

(C.) PRACTICAL ASTRONOMY.

1. The Principles and Practice of astronomically finding the geographical co-ordinates of the place of observation on land and at sea.

2. The Principles that guide the actual determination of the chief astronomical constants of *refraction, aberration, nutation, precession, and solar-parallax* in fixed observatories.

3. An account of the methods hitherto used for determining the figure and size of the earth.

One group of observations must have been made in the field, or at an observatory, and fully reduced so as to show the value of the derived results, and the precautions that have been taken to free them from instrumental and personal errors. Candidates will also be examined as to the best ways of testing the critical parts of instruments, such as a *pivot, screw, level, &c.*

III. CHEMISTRY.

The candidate will be required to pass a searching examination in one of the following branches :—

1. The Chemistry and Chemical Technology of Inorganic Bodies, including Metallurgy.

2. Organic Chemistry.

And to shew a thorough practical acquaintance with Chemical Analysis in all its branches, and with the preparation of pure substances.

IV. ZOOLOGY AND COMPARATIVE ANATOMY.

The same subjects as for the Bachelor of Science Examination, along with a competent knowledge of the structure, development, and classification of a special group to be selected by the Candidate and approved by the Examiner.

V. ANIMAL PHYSIOLOGY.

The candidate will be expected to show a thorough knowledge of Human Physiology, together with the Comparative Physiology of the Nervous System. He will also be expected to show an extensive practical knowledge of Histology, Physiological Chemistry, and Experimental Physiology.

VI. BOTANY.

The Candidate will be required to pass a searching examination in one of the following branches :—

1. Morphology.

2. Physiology.

3. Taxonomy and Distribution,

and to show a competent knowledge of the two others. He will be expected to show a thorough practical knowledge of the branch he selects, and will also be examined practically in the other two.

VII. GEOLOGY, INCLUDING PALÆONTOLOGY AND MINERALOGY.

In addition to a more searching test of the knowledge of the subjects prescribed for the Second Bachelor of Science Examination, Candidates

will be required to show some acquaintance with the Geology and Palæontology of foreign countries as well as of the British Islands. It will be necessary that they evince sound practical knowledge. To test their acquirements in this respect, they will be asked to identify and describe specimens of minerals, rocks, and fossils placed before them ; and from a geological map, which will be furnished to them, to write a paper (with sections) on the geology of the district to which the map refers.

D.—DEGREES OF BACHELOR AND DOCTOR OF SCIENCE IN THE DEPARTMENT OF ENGINEERING.

The Degrees of *Bachelor of Science* and *Doctor of Science* are open to Candidates submitting themselves for examination in Engineering according to the subjoined Rules.

1. Candidates must have the qualifications in general education required for Degrees in Natural and Physical Science. (See p. 476.)

The Regulations for attendance on qualifying classes for three Academic years are the same as for Graduation in Physical and Natural Science. (See page 477.)

2. There will be two examinations for the Degree of *Bachelor of Science*, and a subsequent examination for the Degree of *Doctor of Science*. The examinations are written, oral, and practical.

3. The first examination is as to the general knowledge of the Candidate on the following subjects, viz. :—

MATHEMATICS.
NATURAL PHILOSOPHY.
CHEMISTRY.

The examination is the same as the examination in these subjects for Degrees in Physical and Natural Science. (See p. 481.)

4. This examination is called the *First Bachelor of Science Examination in Engineering*.

5. Candidates who have passed the *First Bachelor of Science Examination* (or who have been exempted from it), may proceed to the *Second Bachelor of Science Examination* at the next periodical Examination after passing the First.

6. For this Examination each Academic year must be constituted by attendance on Science Classes during at least two full courses during one Winter Session, or one such course and two full courses during a Summer Session.

The Second B.Sc. Examination will be in the following subjects :—

DYNAMICS.
ENGINEERING.
DRAWING.

7. Candidates, after passing the Second Examination, and otherwise complying with the Regulations for Graduation, will be recommended to the Senatus for the Degree of Bachelor of Science on their giving at least one day's notice of their intention to graduate.

8. Candidates who have received the Degree of B.Sc. in the Department of Engineering, and who desire to proceed to the Degree of *Doctor of Science*, may present themselves for examination after the expiry of twelve months from the date of their passing the Second B.Sc. Examination.

9. The examinations will be conducted by University Examiners, and the special Examiner appointed by the University Court.

10. The Degree of D.Sc. will not be conferred on any Candidate until he has completed his 21st year.

OUTLINE OF SUBJECTS OF EXAMINATION.

FIRST BACHELOR OF SCIENCE EXAMINATION.

(a.) MATHEMATICS.

(b.) NATURAL PHILOSOPHY.

The Examinations in Mathematics and in Natural Philosophy are the same as for First B.Sc. Examination in Natural and Physical Science. (See p. 481.)

(c.) CHEMISTRY—

Same as for First B.Sc. Examination in Natural and Physical Science. (See p. 481.)

SECOND BACHELOR OF SCIENCE EXAMINATION.

(a.) DYNAMICS—

The Applications of Mathematics (as far as the Elements of the Differential and Integral Calculus) to

Kinematics.

Statics of Rigid Solids, Elastic and Perfectly Flexible Bodies, and Perfect Fluids.

Attraction.

Kinetics of a Particle, of a Flexible Cord, and of a Rigid Solid.

The Simpler Portions of Kinetics of Perfect Fluids.

(b.) ENGINEERING—

Field-Work. — Surveying ; Levelling ; Setting out of Work ; Calculation of Quantities.

Properties of Materials.—General Properties, with special knowledge of their Strength, and the Purposes to which they are applied, and some knowledge of their Cost.

Strength and Stability of Structures Designed by Civil Engineers.—Metal and Timber Bridges and Roofs. Arches in Masonry.

Walls. Retaining Walls. Embankments. Cuttings. Breakwaters. Aqueducts. Pipes. Canals.

Strength and Form of the Elements of Machines.

Design of Combined Structures.—An elementary knowledge of the Design of Bridges and Roofs, of Reservoirs, Embankments, collecting and distributing Machinery of Waterworks, and of the main features of Railway construction, Harbours, and Drainage.

Design of Machinery.—An elementary knowledge of the construction of the Steam Engine, stationary and locomotive, of Prime Movers driven by Water, of Mill-wright work, and the general arrangement of Workshops and Factories.

Prime Movers.—Theory of Heat Engine. The Hot Air Engine. The Steam Engine. The Gas Engine. Turbines and Water Wheels. *Power Transmission*—Telodynamic, Hydraulic. Electric.

(c.) DRAWING—

Candidates must exhibit a good knowledge of Geometrical Drawing, and be able to represent neatly, in the usual manner employed by engineers, Plans and Sections of Buildings and Machinery, and also to make Engineering Sketches with figured dimensions from actual objects.

DOCTOR OF SCIENCE EXAMINATIONS.

1. Every candidate for this Degree must have been engaged for at least two years under an engineer in actual practice. He will be examined in one, and not more than one, of the sub-divisions in each of the two following groups of subjects :—

- | | | |
|---------------------------|---|--|
| I.—PRACTICAL ENGINEERING, | { | (a.) The design of Machinery, with complete Drawings, Specifications and Estimates. |
| | { | (b.) The preparation of Designs, Specifications, and Estimates for Civil Engineering work. |
| II.—APPLIED SCIENCE, | { | (a.) Applied Mathematics. |
| | { | (b.) Technological Chemistry. |
| | { | (c.) Geology. |
| | { | (d.) One Branch of Natural Philosophy. |
| | { | (e.) Telegraphy. |

2. The class of machinery, or the particular engineering work on which the student is examined, will be chosen with reference to the character of the work upon which he has been specially engaged.

3. Candidates will be tested as regards their knowledge of the subjects of Group I. by their being required to submit, as their own work, a complete set of drawings, specifications, and estimates for some proposed project or piece of machinery, for the preparation of which a month or five weeks will be allowed.

These drawings, &c., together with the detailed calculations upon which they have been based, will be sent in to the Examiners; and on their being approved, the candidate will be subjected to a searching examination for the purpose of verifying the authenticity of the work submitted, and of ascertaining the sufficiency of the candidate's professional ability.

4. A high degree of proficiency will be required from the candidate.

E.—DEGREES OF BACHELOR AND DOCTOR OF SCIENCE IN THE DEPARTMENT OF PUBLIC HEALTH.

Two Degrees in Science in the Department of Public Health are conferred by the University of Edinburgh, viz., Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

I. BACHELOR OF SCIENCE.

1. Every Candidate for Graduation in Science in the Department of Public Health must be a Graduate in Medicine of a University of the United Kingdom, or of a Colonial, Indian, or Foreign University specially recognised by the University Court.

2. Every Candidate must be matriculated for the year in which he appears for examination or graduation.

3. There are two Examinations for the Degree of Bachelor of Science in the Department of Public Health.

4. Every Candidate who desires to proceed to the first examination for the said Degree must produce evidence—(a) that he has taken a Degree in Medicine in the University of Edinburgh, or in a University recognised under section 1 hereof; (b) that he has worked for at least six months, or the usual winter session, in a Laboratory where practical instruction is given in the methods of investigating subjects pertaining to Public Health. This course must be attended, after Graduation in Medicine, either in the Public Health Laboratory of the University of Edinburgh, or in a Laboratory in which instruction in Public Health is given, and which has, after due enquiry, been recognised by the University Court.¹

¹*Public Health Laboratories and Teachers recognised under this section:—*

Public Health Laboratory of University	{ E. Percy F. Frankland, Ph.D., 16
College, Dundee,	{ February 1891.
Liverpool School of Science and Technology,	{ George Tait, Ph.D., 15 June 1891.
King's College, London, ...	{ W. R. Smith, M.D., D.Sc.,
	{ November 1891.
University of Aberdeen, ...	{ Professor Matthew Hay, M.D.,
	{ 15 February 1892.

5. Laboratories are not recognised for the purpose referred to in section 4 (*b*), in which provision is not made for the teaching of Public Health Laboratory work in accordance with the Schedule of Laboratory work issued by the Senatus, as provided in section 10 hereof, nor will they be recognised if such work is not taught by a specially recognised teacher.

6. Candidates shall not be admitted to the Second Examination for the said Degree until one year after taking a Degree in Medicine, nor until an interval of at least three months has elapsed after passing the First Examination.

7. Every Certificate of Laboratory attendance must bear that the Candidate worked during his period of attendance for at least fifteen hours per week.

8. Every Candidate who desires to proceed to the second examination for the said Degree must produce evidence—(*a*) that he has attended in this University at least two courses of instruction on subjects included in the Examinations set forth in section 10 hereof; (*b*) that he has attended a course of lectures in which instruction is given in Public Health; and (*c*) that after having obtained a Registrable Qualification in Medicine, he has practically studied the duties of Out-door Sanitary work under the Medical Officer of Health of a county or of a large urban district for a period of not less than six months.¹

9. The subjects of the Examinations for the Degree of Bachelor of Science in the Department of Public Health shall be as follows:—

(*a*) For the First Examination:—1. Laboratory work. The Examination in this department is conducted practically, and by a Written Examination in which the Candidate shall be required to explain the rationale of the investigations contained in the schedule of Laboratory work referred to below. There is also an Oral Examination. 2. Elements of Experimental Physics. The Examination in this Department is conducted by means of written papers, followed by an Oral Examination.

(*b*) For the Second Examination:—1. Medicine in its application to Public Health. 2. Practical Sanitation. 3. Sanitary Law and Vital Statistics. 4. Mensuration and Drawing.

The Examinations in these departments are conducted by means of written papers, and also as far as possible practically; and an Oral Examination in each department is held after the Written Examinations.

10. Detailed Schedules of the subjects of Examination in each department named in section 10 will be issued from time to time by authority of the Senatus.

¹ Requirement (*c*) does not in the meantime apply to Candidates who had obtained Registrable Qualification on or before 1st January 1890.

SCHEDULES OF THE SUBJECTS OF EXAMINATION.
LABORATORY WORK.

(1.) *Examination of Water.*—Physical Properties, Chemical Properties, Microscopical Appearances, Pollution of Potable Waters.

(2.) *Examination of Air.*—Temperature, Pressure, Humidity; Carbonic Acid, Ozone, Micro-organisms, Organic Matter, Noxious Emanations.

(3.) *Examination of Foods.*—Milk, Butter, Butterine, or Oleomargarine, Flour, Bread, Starchy foods, Sugar, Honey, Butcher meat, Fish, Vegetables.

(4.) *Examination of Beverages.*—Tea, Coffee, Cocoa, Alcoholic Beverages, Aërated Waters.

(5.) *Examination of Condiments.*—Salt, Pepper, Mustard, Vinegar, and Preserves; Examination of Lime Juice. Nutritive Value of Dietaries.

(6.) *Sewage.*—Examination of sewage and of effluents after treatment.

(7.) *Soils.*—Temperature, Humidity, Permeability, Chemical Composition, Gases of the Soil, Micro-organisms.

(8.) *Disinfectants and Deodorisers.*—Chemical Examination of the Materials, Determination of their comparative power.

(9.) *Building Materials.*—Chemical and Physical Properties.

(10.) *Clothing.*—Physical Properties of Clothing Materials.

(11.) *Bacteriology.*—Micro-organisms in relation to Epidemic and other Diseases.

PHYSICS.

(1.) *Laws of Motion and Properties of Matter.*—Elasticity, Density, Porosity, Divisibility, Viscosity, &c.

(2.) Elements of Dynamics of Solid and Fluid Bodies.

(3.) Elementary Experimental Facts regarding Energy in the common phenomena of Sound, Light, Heat, Electricity, and Magnetism.

(4.) *Elements of Astronomy.*—Causes of Tides, Eclipses, Aberration, Precession, &c.

MEDICINE IN ITS APPLICATION TO PUBLIC HEALTH.

The General Pathology of Endemic, Epidemic, and other morbid Processes induced by Environment.

The Causes, Clinical History, Diagnosis, Prognosis, and Prevention of Endemic and Epidemic Diseases, as well as of the Epizootics which affect Man; of the Contagious or Infectious Diseases; and of those incidental to particular trades, or otherwise produced by the surroundings of the patient.

PRACTICAL SANITATION.

(1.) *Site and Environment of Dwellings.*—Influence of Position, Aspect, and Climate; Meteorological and Geological Conditions; Soil and Drainage.

(2.) *Water Supply.*—Quantity per head; Relative Eligibility of available Sources of Supply; Estimation of yield; Methods of utilising

various Sources of Supply ; Storage, Subsidence, and Filtration ; Distribution—(a) General, (β) Domestic ; Causes, Detection, and Treatment of contaminated Supply.

(3.) *Air Supply*.—Quantity and Temperature, with knowledge of use of instruments employed in their Measurement ; Causes and Detection of Impurities ; Warming and Ventilation ; Characteristics and Fitness of various methods in use.

(4.) *Excreta, Refuse, and Sewage*.—Character and Quantity of in (a) Urban, (β) Rural Districts—

A. Collection and Removal from (1) the Dwelling, (2) the Town or Village ; Nature, Practical details, and maintenance of the several methods employed.

B. Disposal : (1) Sanitary, (2) Insanitary methods ; Precipitation, Filtration, Irrigation, Discharge ; Design and details of necessary works.

(5.) *General Structural and Mechanical Details of Sanitary Works*.—Character, Fitness, and Qualities of Materials (Brick, Cement, Earthenware, Iron, Lead) ; Design, setting out, and laying of Sewers ; Plumbing and Iron-work.

(6.) *Hospitals*.—Principles of Design and Construction.

(7.) *Infectious and Epidemic Diseases*.—Origin, Modes of Propagation, and Means of Prevention ; Epizootics.

(8.) *Disinfectants*.—Selection and application.

(9.) *Effects of Insanitary Conditions*.—Insufficient house accommodation, Vitiating of Air, Impure Water, Bad or insufficient Food.

(10.) *Unhealthy Occupations*.—Means of mitigating or removing their unhealthiness.

(11.) *Nuisances*.—Urban, Rural, and Domestic.

(12.) *Disposal of the Dead*.—Burial, Cremation.

(13.) Examination of, and report on, the sanitary condition of a dwelling or locality.

SANITARY LAW.¹

Sanitary Administration. Laws affecting Factories, Workshops, Mines, Common Lodging-houses, Removal of Refuse, Nuisances, Rivers Pollution, Alkali Works, Burial Grounds, Unwholesome Food, Adulteration of Food and Drugs. Sale of Poisons.

VITAL STATISTICS.

Leading facts as regards Population, Birth and Death Rates, Distribution of Diseases.

MENSURATION AND DRAWING.

Computation of Areas and Volume ; Scales ; Elements of Ortho-

¹ A knowledge of the Sanitary Law of any part of the British Dominions will be sufficient.

graphic and Isometric Projection ; Figured or dimensioned sketches ; Preparation and interpretation of contoured Maps, Plans, and Working Drawings.

II. DOCTOR OF SCIENCE.

12. Bachelors of Science in the Department of Public Health may, after the lapse of one year, proceed to the Degree of Doctor in the same Department, on producing evidence that they have been engaged in Practical Sanitation since they took the said Degree of Bachelor of Science, and on presenting a Thesis on some subject in the Department of Public Health. Every such Thesis must be certified by the Candidate to have been composed by himself, and must be approved of by the Examiners.

13. Every Candidate for the Degree of Doctor of Science in the Department of Public Health must lodge his Thesis with the Convener of the Science Degrees Committee of Senatus on or before the 30th April in the year in which he intends to graduate.

14. No Thesis will be approved which does not contain either the results of original observations on some subject embraced in the Examination for the said Degree of Bachelor of Science, or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the Candidate, accompanied for the purpose of verification, by precise references to the publications quoted.

F.—THE DEGREE OF BACHELOR OF SCIENCE IN THE DEPARTMENT OF AGRICULTURE.

1. In the Department of Agriculture the Degree of Bachelor of Science is the only Degree conferred.

2. The Rules as to a Preliminary Examination on subjects of General Education are the same as those for Graduation in the Department of Physical and Natural Science.

3. The Rules as to attendance on qualifying Classes for three Sessions are the same as those for Graduation in the Department of Physical and Natural Science ; provided always (1.) that instead of one of such three years of attendance, a year may be spent on a Farm or Farms in pursuance of the practical study of Agriculture ; (2.) That in the case of any subject in the Department of Agriculture, which is not taught in the University, attendance may be given at an Institution specially recognised by the University Court for purposes connected with Graduation in Science in that Department only ;¹ and (3.) That, in the case of Agricultural Chemistry, attendance may be given on a course of Instruction thereon by any teacher of Chemistry who is recognised under the Regulations for Graduation in Medicine.

¹ The Institutions recognised for this purpose are :—The Royal Agricultural College, Cirencester ; The College of Agriculture, Downton ; The University College, North Wales, Bangor ; and The Veterinary Colleges of the United Kingdom.

4. Each Candidate must produce a Certificate of attendance upon a Qualifying Class on each subject of Examination ; and should he, instead of one of the three years of attendance on Classes required in Section 3, have spent a year in the practical study of Agriculture, he must produce a Certificate to that effect.

5. There are two Examinations for the Degree of Bachelor of Science in the Department of Agriculture. These Examinations are Written, Oral, and Practical.

6. The first Examination is in :—¹

(1.) AGRICULTURE, to such an extent as may from time to time be fixed by the Senatus.

(2.) CHEMISTRY, to the extent required for the First Examination for the corresponding Degree in the Department of Physical and Natural Science.

(3.) BIOLOGY :—(a) BOTANY, or (b) NATURAL HISTORY, either subject, at the option of each Candidate.

In either case the Examination shall be to the extent required for the First Examination for the corresponding Degree in the Department of Physical and Natural Science.

(4.) GEOLOGY, in so far as bearing on Agricultural Science.

(5.) ECONOMIC SCIENCE, to such extent as may from time to time be fixed by the Senatus.

7. Candidates who have passed the First Examination may present themselves at the end of six months for the Second Examination.

8. The Second Examination is in :—¹

(1.) AGRICULTURE and RURAL ECONOMY.

(2.) CHEMISTRY, as applied to Agriculture.

(3.) VETERINARY HYGIENE, to such extent as may from time to time be fixed by the Senatus.

(4.) ENGINEERING, to such extent as may from time to time be fixed by the Senatus.

9. Candidates who have passed the Second Examination will be recommended to the Senatus for the Degree of Bachelor of Science.

10. The Examinations are conducted by University Examiners appointed by the University Court, and an additional Examiner in Agriculture, to be appointed by the University Court, after communicating with the Council on Education of the Highland and Agricultural Society of Scotland, and considering any recommendation by them.

¹ This Examination may be taken at one period or in two divisions at separate periods

OUTLINE OF SUBJECTS OF EXAMINATIONS.

FIRST BACHELOR OF SCIENCE EXAMINATION.

I. AGRICULTURE : ITS SCIENTIFIC PRACTICE.

1. *Definition of Agriculture.*—Aid given by the Allied Sciences.
2. *Surface Geology.*—Formation and Classification of Soils—their Physical and Chemical Properties. Importance of Organic Nitrogen. Indications of good or bad Soils—the different Methods of Management.
3. *Drainage.* — Its Practice and Advantages — Irrigation—Wet-Warping — Mixing or Top-Dressing—Claying—Marling—Chalking—Liming—Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.
4. *Implements and Machines of the Farm.*—The Importance of their proper Construction and Careful Management.
5. *Steam Cultivation.*—Its Advantages and Disadvantages.
6. *The Motive Powers Employed on the Farm.*—1st, Man ; 2d, Horse ; 3d, The Mechanical Powers (Water, Wind, and Steam)—their Comparative Values and Advantages.
7. *Farm Servants.*—Their Labour and Wages — Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour.
8. *The Importance of Rotations.*—Different Rotations and reasons why they are adopted—Systems of Farming.
9. *Our Farm Crops* (Grain, Root, Forage, and Hay Crops).—Their Selection and Growth—Prevention of Insect Injuries and Diseases.
10. *Identification of Grasses and other Valuable Pasture Plants.*—Character and Habits of those of importance—Detection of Adulterations—Regulations necessary to protect the Farmer in buying Seeds.
11. *The Management of Permanent Pasture.*—Proper Methods of making new Pasture—its After-treatment.
12. *Weeds in Pastures* and Means of Destroying them.
13. *Silage and the System of Ensilage.*—Its Advantages, &c.—Its Suitability and Unsuitability according to Locality.
14. *Manures.*—Farm-yard Manure — its proper Mixing, Storing, and Application—its great advantage as a General Manure. Special Manures and so-called Artificials—their Uses, Abuses, and Adulterations — the proper Times and Methods of their Application. The Value and Use of Liquid Manure and Town Sewage.
15. *Buildings and Fences.*—The proper Construction of Fences—the General Arrangement of Farm-Buildings—the best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c.—Covered Yards—Ventilation—Drainage of Houses and Farm-yards.

2. CHEMISTRY.

3. BOTANY.

4. NATURAL HISTORY.

The Examinations in Chemistry, Botany, and Natural History are the same as for the First B.Sc. in Natural and Physical Science. (See p. 481.)

5. GEOLOGY AS BEARING ON AGRICULTURE.

(1.) *Physical Geography and Dynamical Geology*.—The nature and operation of Geological agents :—Rain, Underground Water, Rivers, Ice, the Sea, Life, Earthquakes, Volcanoes, Movements of Upheaval and Depression.

(2.) *Mineralogical and Petrological Geology*.—Characters of the principal Rock-forming Minerals : Composition, Origin, and Distribution of the more important and commonly occurring Rocks.

(3.) *Structural Geology*.—The Structure of Rock-masses, more especially Bedding, Joints, Faults, and Denudation.

(4.) *Agricultural Geology*.—Nature and Origin of Soils and Subsoils ; Draining in connection with Geological Structure ; Mineral substances used as Manures.

6. ECONOMIC SCIENCE AS APPLIED TO AGRICULTURE.

1. The Food Supply of the United Kingdom.
2. The Wages of Agricultural Labour.
3. The Profits of the Farmer.
4. The Rent of Land and Causes of Variations in Rent.
5. Contracts for the Hire of Land.
6. The Risks of Long Leases.
7. Compensation for Improvements.
8. Fixity of Tenure and its Effects.
9. The Prices of Agricultural Produce.
10. Foreign Competition.
11. Effects of the Appreciation of Gold and the Depreciation of Silver.
12. Effects of various Imperial and Local Taxes on Agriculture.

SECOND BACHELOR OF SCIENCE EXAMINATION.

I. AGRICULTURE AS FOR FIRST B.SC. AND THE FOLLOWING—

(1.) *Live-Stock, embracing Cattle, Pigs, Horses, Sheep*—The Various Breeds of each, and suitability of some to Local Conditions—"The Principles of Breeding." Feeding and Management—Cost of Feeding—Proper Mixtures of Food to Use. Cost of the Production of a Stone of Beef, Mutton, and Pork, showing the Amount of Profit in each Case.

(2.) *Dairying in all its Branches*, including the suitability or otherwise of surrounding Conditions—the proper Classes of Dairy Stock to keep, and their Management—the Treatment of Milk, and its Sale or Manufacture into Cheese, Butter, &c.

(3.) *Feeding Stuffs*—Suitability of the Common Food Substances to

the Different Classes of Farm Stock—The Purchase, Storing, and Administration of the same—their Manurial Residues.

2. AGRICULTURAL CHEMISTRY.

1. *Soil*.—Origin—Chemical and Physical Characters—Composition and Improvement of Soil—Functions of Soil.

2. *Plants*.—Constituents of Plants: Organic, Inorganic, and Proximate. Composition of Ash. Changes which take place during Plant Growth. Plant Food and its Sources.

3. *Manures*.—General Principles of Manuring. Composition and Nature of general and special Manures. Valuation and Adulteration of Manures. Valuation of Unexhausted Manure in Soils.

4. *Crops*.—Rotation. Cereal Crops. Leguminous Crops. Forage Crops. Root and Tuber Crops. Crop Residues.

5. *Live Stock*. Animal Nutrition. Constituents of Animals. Foods, Destination of Food. Digestibility and Comparative Nutritive Value of Foods. Water. Animals as Producers of Food and Manure.

6. *The Dairy*.—Constituents and Properties of Milk, Cream, Butter, Cheese, and minor products. Adulterations and Modes of Detection.

3. VETERINARY HYGIENE.

1. The Comparative Osteology (rudimentary) of the Horse, Ox, and Sheep.

2. The Physiology of Dentition in Horse, Ox, Sheep, and Pig, more especially as indicative of the Age of the Animal.

3. The Physiology of Gestation; the Diseases incidental to the pregnant state, and also those consequent to the act of parturition.

4. Description of the Digestive Organs of the Horse, Ox, and Sheep (separately), also their Physiology, and most ordinary Diseases.

5. Contagious and other Diseases of Farm Stock. Prevention and Treatment of Diseases.

4. ENGINEERING.

1. *Engineering Field Work*.—Surveying, with special reference to Estate and Parish Surveying, Levelling, Plotting of Surveys and Sections, Calculation of Quantities.

2. *Mechanics*.—(a) Principles of Statics; couples; moments of forces; parallel and inclined forces; centre of gravity; moments of inertia; friction. (b) Principles of Kinematics and Kinetics; Newton's laws of motion; Conservation and transformation of energy.

3. *Strength and Properties of Structural Materials*, including their fitness and adaptability, together with some knowledge of their cost.

4. *Strength and Stability of Structures*.—General knowledge of the

design, construction, and maintenance of Roads, Roofs, Bridges, Embankments, Retaining Walls, Aqueducts, and General Buildings.

5. *Hydraulics*.—The laws governing the flow of water in open and closed channels, and its discharge through orifices ; Systems of Drainage and Irrigation ; Pumps, &c.

6. *Mechanism and Machinery*.—General Principles and means of transmission, conversion, and modification of motion ; general millwright work with special reference to the machines ordinarily employed for agricultural purposes.

7. *Prime Movers*.—A knowledge of the sources and modes of estimating power ; The Steam Engine ; Pneumatic Machines ; Hydraulic Motors, Water-wheels, Turbines, &c.

FEES.¹

The following are the fees payable for Degrees in Science :—²

1. Doctorate in Mental Science, ...	£7	7	0
2. Doctorate in Pathology, ...	7	7	0
3. Departments of Physical and Natural Science and Engineering—			
For the preliminary examination, or for registration of any exempting qualification, ...	1	1	0
For the First Bachelor of Science examination, ...	2	2	0
For the Second Bachelor of Science examination, ...	2	2	0
For the Doctor of Science examination, ...	5	5	0
	£10	10	0
4. Department of Public Health—			
For the First Examination for the Degree of Bachelor, ...	£5	5	0
For the Second do.	5	5	0
For the Degree of Doctor, ...	5	5	0
	£15	15	0
5. Department of Agriculture—			
For the Preliminary Examination, or for Registration of any exempting Qualification, ...	£1	1	0
For the First Bachelor of Science Examination	2	2	0
For the Second do. do.	2	2	0
	£5	5	0

¹ When names are not entered nor fees paid on or before the stated dates, a late entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his Name is entered, all the necessary Certificates, &c., lodged, and the Fee paid.

² Candidates should apply for their Diplomas at the Matriculation Office, immediately after obtaining the Degree. There is no additional charge for the Diploma. Any Graduate who cannot apply personally for his Diploma, is required to give written authority to some person to receive and give a receipt for it.

In the event of a Candidate not passing, the fee is not returned, but he may appear at *one* subsequent Examination without paying an extra fee, and at any future Examination on paying one-half of the fee.

Every Candidate for Graduation is required to pay the Fee of £1 for Registration as a Member of the General Council of the University, at least one clear day before the date of Graduation.

All communications relating to the Curriculum and Examinations for degrees in the department of the Mathematical, Physical, and Natural Sciences, Engineering, Public Health, and Agriculture, and to Examinations for Science Fellowships and Scholarships, &c., should be addressed to *The Convener of the Science Degrees Committee*, at the office of the Faculty of Medicine, University New Buildings, where the Schedules for Examinations are issued and the Certificates of Candidates examined.

The Examination Fees are payable at the *Matriculation Office*, University, on Certificate from the Convener of the Science Degrees Committee that the necessary Matriculation Tickets and Class Certificates have been examined. The Matriculation and Registration Fees are also payable at the *Matriculation Office*, University Old Buildings. When Candidates cannot attend personally to pay the fees, they should transmit them to the Chief Clerk of the University Court, who is alone authorised to receive the fees and grant receipts by crossed *Post Office* or *Postal Orders*, or by *Bank Drafts only*, and not by cheques on private accounts.

DATES OF EXAMINATIONS AND FOR PRESENTING CERTIFICATES AND PAYMENT OF FEES.

Preliminary Examination in General Education. 4th, 5th, 6th, and 7th October 1892; and 7th, 8th, 9th, and 10th March 1893. Hours at page 365.

Names to be given in and Fees paid on or before 26th September 1892, and on or before 21st February 1893.

MATHEMATICAL, PHYSICAL, AND NATURAL SCIENCES.

First B.Sc. Examination. Mathematics, 11th October 1892, at 2.30 P.M., and 12th October, at 9 A.M.; 3rd April 1893, at 3 P.M., and 4th April at 9 A.M.; Natural Philosophy, 13th October 1892, at 1 P.M., and 5th April 1893, at 1 P.M. Names to be given in, certificates shown, and fees paid on or before 3rd October and 13th March; Practical Chemistry, 23rd July 1892 and following days, and 18th March 1893 and following days. Chemistry, 25th July 1892, and 20th March 1893, at 10 A.M.;

Botany, 25th July 1892, and 20th March 1893, at 1 P.M.; Zoology, 26th July 1892, and 21st March 1893, at 10 A.M. Names to be given in, certificates shown, and fees paid on or before 18th July and 13th March.

Second B.Sc. Examinations, Mathematical Sciences. Mathematics, 7th April 1893, 9 to 12 A.M. and 1 to 4 P.M.; Natural Philosophy, 8th April 1893, 9 to 12 A.M. and 1 to 4 P.M. **Physical Experimental Sciences** (Physics), 13th October 1892, and 8th April 1893, 1 to 4 P.M.; (Chemistry), 25th July 1892, and 20th March 1893, at 10 A.M. and 1 P.M. The Practical Examination in the Laboratory will be held shortly after the Written Examination. **Natural Sciences** (Botany), 25th July 1892, and 20th March 1893, at 1 P.M.; (Zoology), 26th July 1892, and 21st March 1893, at 10 A.M.; (Physiology), 25th July 1892, and 20th March 1893, at 10 A.M.; (Geology), 26th July 1892, and 21st March 1893, at 1 P.M. Names to be given in, certificates shown, and fees paid on or before 18th July and 3rd October 1892, and 13th March 1893 respectively.

ENGINEERING.

First B.Sc. Examination. Practical Chemistry, 23rd July 1892, and 18th March 1893, and following days. Chemistry, 25th July 1892, and 20th March 1893, at 10 A.M. Mathematics 11th October 1892, at 2.30 P.M., and 12th October, at 9 A.M., 3rd April 1893, at 3 P.M., and 4th April, at 9 A.M.; and in Natural Philosophy, on 13th October 1891, and 5th April 1893, at 1 P.M. each day. Names to be given in, certificates shown, and fees paid on or before 18th July and 3rd October 1892, and on or before 13th March 1893.

Second B.Sc. Examination. Engineering and Drawing, 2nd and 3rd November 1892, at 11 A.M. and 2 P.M. each day, and 4th November, 10 A.M. to 1 P.M. and 2 P.M. to 5 P.M.; and 3rd and 4th April 1893, at 11 A.M. and 2 P.M. each day, and 5th April, 10 A.M. to 1 P.M. and 2 P.M. to 5 P.M. Dynamics, 1st November 1892, and 8th April 1893, at 1 P.M. each day. Names to be given in, certificates shown, and fees paid on or before 21st October 1892, and 13th March 1893 respectively.†

Examinations for D.Sc. Candidates must present their Theses and pay their fees on or before 30th April in the year in which they propose to graduate. The Examinations will take place after the Theses have been approved.

PUBLIC HEALTH.

First B.Sc. Examination, 25th July 1892 and 20th March 1893; Laboratory work at 10 A.M., and Physics, at 1 P.M. each day; Practical Work in the Laboratory, 26th July 1892, and three succeeding days, and 21st March 1893, and three succeeding days. Names to be given in, certificates shown, and fees paid on or before 11th July and 13th March respectively.

Second B.Sc. Examination, 4th, 5th, 6th, and 7th July 1892. Medicine, 4th July, 10 to 12. Sanitary Law and Vital Statistics, 4th July, 1 to 3. Practical Sanitation and Drawing, 5th July 10 to 12 and 1 to 4. Oral Examination, 6th and 7th July. Names to be given in, certificates shown, and fees paid on or before 24th June.

D.Sc. Candidates are required to lodge their Theses and proof of their eligibility with the Convener of the Science Degrees Committee at the Office of the Faculty of Medicine, University New Buildings, and to pay the fees to the *Clerk of the University*, on or before 30th April of the year in which they propose to graduate.

AGRICULTURE.

First B.Sc. Examination. Agriculture, 14th October 1892, 9 to 12, and 27th March 1893, 9 to 12. Practical Chemistry, 23rd July and 18th March and following days. Chemistry, 25th July 1892, and 18th March 1893, 10 to 12. Botany, 25th July 1892, and 20th March 1893, 1 to 3. Natural History, 26th July 1892, and 21st March 1893, 10 to 12. Geology, 26th July 1892, and 21st March 1893, 1 to 3. Economic Science, 14th October 1892, and 27th March 1893, 1 to 3 each day. Names to be given in, certificates shown, and fees paid, on or before 18th July, 3rd October, and 13th March.

Second B.Sc. Examination. Agriculture, 14th October

1892, 9 to 12, and 27th March 1893, 9 to 12. Chemistry, 13th October 1892, 9 to 11, and 28th March 1893, 10 to 12. Veterinary Hygiene, 13th October 1892, and 28th March 1893, 1 to 3 each day. Engineering, 7th October 1892, 10 to 1, and 27th March 1893, 1 to 4. Names to be given in, certificates shown, and fees paid on or before 11th July and 3rd October 1892 and 13th March 1893.

Examination Papers for Degrees in Science.

SECTIONS C, D, E, F.

PRELIMINARY EXAMINATION.

[For Questions in the Preliminary Subjects, see under Preliminary Examinations for Degrees in Medicine.]

FIRST EXAMINATION FOR B.Sc.

[For Questions in Mathematics and Natural Philosophy for Degrees in Sections C and D, see under Examination in Arts; and for Questions in Chemistry, Botany, and Zoology for Degrees in Sections C and F, and in Chemistry for Degrees in Section D, see under First Professional Examination for Degrees in Medicine.]

SECTION E.—Department of Public Health.

LABORATORY WORK.

20th July 1891.—11 to 1 o'clock.

1. Describe in detail and give the rationale of any two methods for the quantitative determination of organic matter in water. Criticise the methods you have described.

2. How would you determine the "available chlorine" in a sample of bleaching powder? Explain fully the principle of the process.

3. What are the different methods in use for sterilising nutritive substances to be used as media for the cultivation of micro-organisms?

How would you ascertain whether the medium had been successfully sterilised or not?

21st March 1892.—11 to 1 o'clock.

1. How would you examine the physical characters of the soil of a site for dwelling-houses, and how would you report as to the bearing of these characters on the suitability of the site?

2. Give the composition of the chief cultivating media in use for bacteriological investigations, stating in each case the kinds of micro-organisms for which the medium is most suitable.

3. How would you determine the quantity of fixed alkali (present as salts) in a sample of potable water?

PRACTICAL WORK.

The following are examples of what were given at this Examination :—

July 1891.

(This part of the Examination lasts four days.)

1. Quantitative analysis of infants' food.
2. Quantitative analysis of effluent from a Sewage Farm.
3. Bacteriological examination of samples of potable water.

PHYSICS.

Monday, 20th July 1891.—2 to 4 o'clock.

(Nine Questions at most to be answered.)

1. Give Newton's first and second laws of motion, and point out the immediate consequences of each.
2. Mention the principal transmutations of energy which occur when a pendulum swings in a resisting medium.
3. Contrast and compare the terms Density and Specific Gravity. How is it proved that they are proportional?
4. Describe and explain the process of dialysis.
5. Give a general account of the method by which the sun's distance is determined by means of the transit of Venus.
6. An object is placed at a considerable distance in front of a double concave lens; draw a figure showing the path of the rays by which the image is formed.
7. Describe and account for various forms of mirage.
8. Define the dew point, and describe an instrument by means of which it may be determined.
9. Explain why the speed of propagation of sound depends on the temperature and not on the density of the air.
10. Define the latent heat of a liquid, and explain a method of determining the latent heat of water.
11. Define the terms Magnetic Meridian and Magnetic Declination. Explain how the latter varies over the surface of the earth.
12. Describe any form of electrometer, mentioning the principles involved.

21st March 1892.—2 to 4 o'clock.

NINE only of the following questions to be answered.

1. "Force is the rate at which an agent does work per unit of length." Explain the statement.

2. Describe and explain the facts upon which the idea of the universality of gravitation is based.

3. Mention and account for the principal phenomena of capillarity.

4. What is meant by the terms Pitch and Quality as applied to musical sounds? Account for the difference in quality of notes of the same pitch sounded on an open and closed organ pipe respectively.

5. Define the principal focus of a lens. An object is placed (*a*) beyond the principal focus of a concave lens; (*b*) between the focus and the lens. Draw figures showing the paths or rays of light from each extremity of the object, and the position of the images formed in the two cases.

6. Describe the construction of a Nicol's prism, and explain its use.

7. Describe the different modes of the transference of heat.

8. Distinguish between thermal capacity and specific heat. Four pounds of copper filings at 130° are placed in 20 pounds of water at 20° , the temperature of which is thereby raised 2° . What is the specific heat of copper?

9. In what respects do the spectra of incandescent gases differ from those of luminous solids or liquids? How is the spectrum of a gas affected by the pressure?

10. Explain the action of a Leyden jar, defining in relation to it the terms quantity, capacity, and potential. Express the energy of the charge in terms of any two of these.

11. Describe the different methods of producing electric currents. Define the ampère and volt.

12. Explain the action of the force-pump. A force-pump is working 100 feet below a reservoir, and its plunger has a surface of 5 square inches. Find the force with which it must be thrust down in order to raise water to the reservoir.

SECTION F.—Department of Agriculture.

AGRICULTURE.

Friday, 16th October 1891.—9 to 12 o'clock.

1. What are the principal effects of combined nitrogen on the growth of plants? From what source is it chiefly derived? When applied to cereals does it hasten or retard the ripening process?

2. On what class of soils is clay burning usually practised? What are the supposed theoretical and practical advantages?

3. What acreage will a sheaf-binder by a good maker cut in a day of ten hours? How many horses will be required to keep it at full speed during a working day? How many men and boys will be required with the machine and horses, including the knife sharpener? How many hands will be required to mow the corners and to stook? What will be the cost per acre, including horses, labour, and 10 per cent. on the cost price of the machine?

4. What is the most economical system of dealing with the labour of the farm? Contrast the systems in the interests of both the employer and the employed of the hiring for fixed periods with board and lodgings in the farmhouse, and that by which day-labourers are paid weekly. Advance some reasons for your preference.

5. What is the practical value of a rotation of crops under the four course system? Is one heavy dressing of farmyard manure sufficient of itself to produce good crops throughout the whole rotation? If not, when and how would you supply the deficiency?

6. Name some of the insect pests most injurious to our cereal crops. What means would you adopt as preventative or destructive agents?

7. Name some of the more important varieties of grasses to be found in the best feeding pastures, and describe their habits of growth.

8. What is the best means of renovating a permanent pasture on the Keuper Marl or New Red Sandstone laid down six years before with a well-selected variety of seeds, the land having been twice mown, and during the rest of the period grazed principally with sheep, no manurial dressing having been applied?

9. What do you suggest as the best means of eradicating thistles, the most troublesome weeds on grass lands? How long will it require to effect this purpose?

10. What do you consider the best class of hedge-fence on a lowland farm? How should it be planted? What will it cost per yard? How many years will elapse before it becomes a protective fence?

28th March 1892.—9 to 12 o'clock.

1. What geological and climatic conditions would help you in forming an opinion of the productive capabilities of different soils in localities in which you have had no previous practical experience?

2. What quantity of lime is given as an ordinary dressing when applied (*a*) to light soils, and (*b*) to strong clays? Describe the mechanical and chemical action of lime on different soils, stating advantages and disadvantages.

3. Contrast the usefulness of fixed and portable machinery on the farm. Under what circumstances could electricity be of service to the farmer.

4. What do you understand by a rotation of crops? What is the best rotation for a light soil? What would you recommend for a moderately strong loam, and what for an adhesive clay? advancing some practical reasons for the variation in each case.

5. What clovers and grasses do you recommend for a two years' ley? and describe their characteristics and feeding value. How should the land and crop be treated during these two years? If mown, name the year and date of cutting.

6. In laying down land to permanent pasture, which is the best season,—spring, late summer, or autumn,—supporting your preference by practical reasons. Should the seeds be sown with or without a crop.

What are the best manures to employ? and what system of management do you recommend during the first two years?

7. In cultivating a loam on the six-course rotation, to what crops, and in what quantity, would you apply the farmyard manure? How would you prepare the manure previous to its application to the land? What practical method do you recommend of conserving and applying the liquid manure?

8. On most tillage farms modern practice is setting in the direction of extending the growth of catch crops. What varieties of plants most readily lend themselves for this purpose? When, and in what order, should they be sown? State the most suitable kinds of artificial manures, when they should be applied, and the quantities per imperial acre.

GEOLOGY.

Tuesday, 21st July 1891.—2 to 4 o'clock.

1. Describe the chemical action of rain (weathering) on the felspars, micas, pyroxenes, and amphiboles of igneous and schistose rocks.

2. How do plants aid in the disintegration of rocks.

3. Distinguish between Sedentary and Transported Soils.

4. Give the petrological characters of Granite, Porphyrite, Greywacké, Gneiss, and Serpentine.

5. In what respects do the mineral ingredients of Boulder-clay and Alluvium differ?

6. Draw a section to illustrate the general geological structure of districts in which Artesian Wells have been successfully sunk.

7. What is "Moor-pan," and how has it originated?

8. Describe shortly how soils are modified by the action of Epigene agents.

22nd March 1892.—2 to 4 o'clock.

1. Give some account of *natural springs*.

2. Describe the chemical action of rain upon *limestones, argillaceous rocks, granite, and basalt*.

3. In what respects do the constituents of alluvial deposits differ from those of boulder-clay?

4. What kinds of soil are yielded by *greywacké and slate, granite and gneiss, basalt-rocks, and limestones*?

5. Draw a section illustrating the following structures:—*Unconformity, anticline, syncline, fault, dyke*.

6. Give the mineralogical characters of *orthoclase, biotite, augite, calcite, and quartz*.

7. Give the petrological characters of *dolomite, mica-schist, serpentine, and marble*.

ECONOMICS.

16th October 1891.—1 to 3 o'clock.

1. Distinguish between wealth and money, and notice any fallacies that have arisen from not making clear the distinction.
2. Explain the theory of economic rent, and examine the immediate and ultimate effects of very widespread and general improvements in agricultural production.
3. Examine the connection between fair (judicial) rent, fixity of tenure, and free sale of tenant right. In what cases (if any) do you consider that one or more of these may be justifiable?
4. State the principal arguments for and against the nationalisation of land.
5. In New Zealand it has recently been proposed to impose a system of graduated taxes upon agricultural land. In the case of very large estates this may amount to 5s. in the £ of rental, whilst small estates are free. Examine this proposal.
6. Explain the law of supply and demand, and the way in which it is related to cost of production. Illustrate by reference to wheat and cloth.
7. Distinguish between movements in general prices and relative prices, and show the importance of both with reference to agricultural rent.

28th March 1892.—1 to 3 o'clock.

1. Compare the advantages according to different circumstances of forming on a large and on a small scale respectively.
2. What is capital? On what principles ought a tenant to be allowed compensation for capital sunk in the soil?
3. Why does the rent of agricultural land tend to rise over a long period? To what causes is the recent fall in rents in this country to be attributed?
4. Examine the objections to the Nationalisation of Land. How far do these objections in your opinion apply to the acquisition of land by County Councils for establishing small holdings?
5. State the principal arguments in favour of Free Trade, and note the exceptions allowed by Adam Smith.
6. State how the commerce of towns tends to improve agriculture.
7. Explain the terms:—Measure of Value, Appreciation of Gold, Depreciation of Silver, Real Wages.

SECOND EXAMINATION FOR B.Sc.

SECTION C.—Department of Physical and Natural Science.

(a) THE MATHEMATICAL SCIENCES.

[*For questions in the Mathematical Sciences, see under Examinations for Degrees in Arts with Honours in Mathematics.*]

(b) THE PHYSICAL EXPERIMENTAL SCIENCES.

EXPERIMENTAL PHYSICS.

15th October 1891.—1 to 4 o'clock.

(*Answer, fully, six of the following questions.*)

Describe a method of finding :—

1. The specific heat of air at constant volume.
2. The latent heat of saturated steam at any assigned temperature.
3. The thermal conductivity of ice.
4. The specific inductive capacity of vulcanite.
5. The refraction constants of iceland spar for sodium light.
6. The electric conductivity of copper.
7. The constant of aberration.
8. The compressibility of mercury.
9. The rigidity of sandstone.
10. The critical temperature of water-substance.
11. The constant of diffusion of one gas in another.
12. The average radiation of energy, per second, per square foot, from the sun's surface.

9th April 1891.—1 to 4 o'clock.

Describe fully a method of experimentally determining each of any six of the following :—

1. The critical temperature of water-substance.
2. The form of the extraordinary wave-surface in Iceland spar.
3. The total intensity of the earth's magnetic force at any station.
4. The thermal conductivity of a liquid.
5. The specific heat of a gas at constant pressure.
6. The surface tension of mercury.
7. The limiting range of sensible molecular force.
8. The rigidity of an isotropic solid.
9. The viscosity of a liquid.
10. The self induction of a coil.

CHEMISTRY.

20th July 1891.—11 to 1 o'clock.

1. How can pure manganous chloride be prepared from the solution left from the preparation of chlorine by the action of hydrochloric acid on native black oxide of manganese?
2. How is cobalticyanide of potassium prepared?
3. Describe the oxides of phosphorous, giving the modes of preparation, and properties, including the action of heat.

20th July 1891.—2 to 4 o'clock.

4. Describe shortly the experimental details of vapour density determination by Victor Meyer's method. State the data which must be noted in making an actual experiment, and show how to make use of these data in the subsequent calculation.
5. Give the constitution, with the evidences for it, of any four of the following substances:—Acrolein, Phenylpropionic acid, Styrol, Pyruvic acid, Betaine, Pinacolin, Glucosazon, Quinone.
6. What is a Glucoside? Give three examples, and state in each case how hydrolysis is effected and what are the products of hydrolysis?

21st March 1892.—11 to 1 o'clock.

1. How has Fluorine been prepared? How does it differ in its properties from Chlorine?
2. How is Silicon prepared? What is the action of Hydrochloric Acid Gas on Silicon, and of water on the product?
3. Briefly describe any of the theories of solution.
4. Give a short account of the methods of preparation and of the general properties of Ketones.

21st March 1892.—2 to 4 o'clock.

1. What is Dulong and Petit's law? Mention the cases in which the specific heat of an element is notably different from that required by Dulong and Petit's law?
2. Give the constitution, with evidence for it, of the following substances:—(a) Hydrocyanic Acid; (b) Urea; (c) Pyridine; (d) Naphthaline; (e) Lactic Acid; (f) Fumaric Acid; (g) Pinacone; (h) Benzoic Acid; (i) Cinnamic Acid; (k) Isatine.
3. How would you prepare the following substances:—(a) Crotonaldehyd; (b) Terephthalic Acid; (c) Malonic Ether; (d) Quinoline?

(c.) THE NATURAL SCIENCES.

ZOOLOGY AND COMPARATIVE ANATOMY.

*21st July 1891.—11 to 1 o'clock.**(Any four questions to be answered.)*

1. Give some account of *sexual dimorphism* among the Invertebrata, pointing out its significance in the Cirripedia. What are the effects of

parasitism and of the *sessile mode of life* respectively on the organisation and life-history of an animal?

2. Compare the organisation and life-history of *Physophora* with those of *Velella*.

Give an account of the origin of the sexual cells among the Hydrozoa, and discuss the case of Hydra.

3. State what you know of the comparative anatomy of the *thymus* and *thyroid glands* of the Vertebrata, and describe their development in Scyllium.

4. Trace the various modifications, among the Vertebrata, in the structure of the *paired eyes*, including glands, muscles, and other accessory structures. How do you account for their degeneration in such forms as Proteus and Talpa?

5. What do you understand by *discontinuous* distribution? Give examples.

22nd March 1892.—11 to 1.30 o'clock.

1. Compare the central nervous system and sense organs, the skeleton and the excretory organs in (a) *Myxine*, (b) *Scyllium*, and (c) a Urodele Amphibian.

2. Contrast the skull (including the teeth) and the limbs in *Menopoma*, *Crocodilus*, and *Erinaceus*. Account, as far as possible, for the geographical distribution of the *Edentata* and *Primates*.

3. Give an account of the development and adult condition of the renal organs and sexual ducts in (a) an Elasmobranch, (b) a Ganoid. Point out succinctly the chief differences met with in other Vertebrates.

4. Write an account of the life history of *Sacculina*, and compare it with that of one of its nearest allies. What are "complemental males," and where are they met with? Discuss the views which have been held as to their significance.

5. Describe minutely, with figures, the process of conjugation in a typical Infusorian, and contrast it briefly with the processes in egg and sperm development which precede fertilisation in a Metazoan.

BOTANY.

Monday, 20th July 1891.—2 to 4 o'clock.

(Four Questions only to be answered. Illustrate your answers by drawings.)

1. From what sources, in what ways, and at what times do green plants obtain nitrogen?

2. Give an account of the Wolff-Goethe doctrine of metamorphosis, and show how it has influenced the progress of Botany.

3. By a series of examples, illustrate Autoxyeny, Metoxyeny, and Lipoxyeny. Show how these habits are of advantage to plants.

4. Write an account in detail of the life-history of one of the

following:—*Lycopodium cernuum*, *Cycas revoluta*, *Hymenophyllum tunbridgense*.

5. State what you know of the characteristic features of the flora of the carboniferous period.

6. Give an account of the flora of any region with which you are acquainted, and show how climatic and other conditions have determined its character.

21st March 1892.—2 to 4 o'clock.

1. Describe in detail the phenomena of phylloptosis. Of what value is this to a plant in which it occurs?

2. Write an account of the life-history of one of the following:—*Isoetes lacustris*, *Riccia glauca*, *Cedogonium ciliatum*.

3. Give an account of the unorganised ferments found in plants, and point out their value to the plant.

4. Describe the structure and discuss the affinities of the Marattiaceæ. What evidence from palæophytology is there of the antiquity of the Marattiaceæ?

5. Give an account of the characteristic features and the origin of the flora of the British Isles.

PRACTICAL BOTANY.

23rd July 1891.—10 to 1 o'clock.

1. Make preparations of specimen A. Mount and leave for examination. Make illustrative drawings with references.

2 to 6 o'clock

2. By aid of the Flora given you determine the genus and species of specimens B and C.

3. Refer to their natural order specimens D, E, and F.

4. Briefly describe and identify specimens G, H, I, J, K, L, M, N, O.

A. *Salsola Kali*; B. *Anagallis tenella*; C. *Brachypodium sylvaticum*; D. *Alisma ranunculoides*; E. *Suaeda maritima*; F. *Glaux maritima*; G. Orange pulp hairs; H. Almond endocarp; I. *Sphenopteris affinis*; J. *Staphylopetris*; K. Stem of *Lepidodendron vasculare* in transverse section; L. *Stigmaria ficoides* in transverse section; M. Petiole of *Philodendron* in section; N. *Ficus* water pores; O. Pollen of *Zostera*.

23rd March 1892.—10 to 1 o'clock.

1. Make a series of sections illustrating the structure of specimen A. Mount and leave your preparations for inspection. Sketch them, and give a list of explanatory references. From your examination of the specimen state what you would consider to be the affinity of the plant.

A. *Witsenia corymbosa*.

23rd March 1892.—2 to 5 o'clock.

2. Describe the flower of specimen B.
3. Describe and mention the natural order of specimen C, giving your reasons.
4. Describe the flower and suggest the natural order of specimen D.
5. Describe the inflorescence and flower of specimen E.
6. Identify, giving reasons for identification, specimens F, G, H, I.
B. Napoleona imperialis. *C. Eranthemum pulchellum.* *D. Aspidistra lurida.* *E. Restio verticillata.* *F. Batrachospermum moniliforme.* *G. Aerial root of Vanda.* *H. Water stomata of Ficus diversifolius.* *I. Rachiopteris.*

PHYSIOLOGY.

Monday, 20th July 1891.—11 to 1 o'clock.

1. Give a detailed account of the terminations of nerves in the cutis vera and epidermis, and of the tactile and thermal senses.
2. Give an account of the secretory activity of a hepatic cell.
3. What is the present state of our knowledge regarding the process of absorption from the small intestine?

21st March 1892.—11 to 1 o'clock.

1. Give an account of the minute structure and physiology of the spleen, and explain the methods by which our present knowledge of its physiology has been ascertained.
2. Draw a diagram representing a transverse section of the cervical portion of the spinal cord of man; name the several tracts in the white matter, show their relative positions, and explain the methods by which our knowledge of their functions has been arrived at.
3. Show by a sketch the experimental arrangements suitable for a study of the effect of fatigue on the contraction of muscle; state the facts ascertained regarding the fatigue by physical and chemical methods.

GEOLOGY, INCLUDING MINERALOGY AND PALÆONTOLOGY.

21st July 1891.—2 to 4 o'clock.

(Not more than two Questions under each division to be attempted.)

A.

1. What are Fulgurites?
2. Describe the mode of formation of "Pipes" in chalk.
3. How do waterfalls act in the erosion of ravines?

B.

4. Describe the axis of the Tetragonal, Hexagonal, and Monoclinic systems.

5. Give some account of the Felspathoid group of minerals. How do they occur?

6. Give the macroscopic and microscopic characters of Obsidian, Andesite, Liparite, Chlorite-schist, Marble, and Clay-slate.

C.

7. Draw a ground-plan of a fault traversing synclinal strata marking the direction of downthrow, and showing how the outcrops are affected.

8. Describe the distinguishing characteristics of intrusive sheets and necks.

9. Define the terms Lamination, Foliation, and Slaty Cleavage.

D.

10. Construct a table of the Scottish Carboniferous System, and place opposite each sub-division the names of some commonly-occurring fossils.

11. Give the geological range of the following forms:—*Ogygia*, *Nautilus*, *Trigonia*, *Microlestes*, *Anchitherium*, *Holoptychius*, *Calamites*, *Terebratula*, *Labyrinthodon*, *Megaceros*.

12. Describe the structure of *Pterodactylus*.

22nd March 1892.—2 to 4 o'clock.

(THREE questions only in each Division to be answered.)

A.

1. In what various ways have lakes been formed?

2. Describe the geological action of a glacier.

3. What is the origin of soil?

4. What is Darwin's theory of coral islands?

B.

5. Give the mineralogical characters of the rock-forming compounds of iron, and describe the mode of their occurrence and the part they play as constituents of rocks.

6. Describe the composition, the origin, and mode of occurrence of the following rocks, and give the mineralogical characters of the ingredients of which each is composed:—*Granite*, *marble*, *basalt*, *rock-salt*, *hornblende-schist*, *serpentine*, *dolomite*.

7. What is polysynthetic structure? Give examples.

8. Under what conditions do isometric minerals and amorphous mineral substances occasionally polarise.

C.

9. Draw one section to illustrate the following structures:—*Isoclinal strata*, *unconformity*, *overlap*, *outlier*, *inlier*, *dyke*, *fault*.

10. What is meant by the *fan-shaped structure of mountains*?

11. Describe the leading phenomena of *necks*.

12. What are *laccolites*?

D.

13. Describe the structure of a *trilobite*.
14. What were the chief limestone-formers of Palæozoic, Mesozoic, and Cainozoic times?
15. Give some account of the physical conditions under which the Triassic rocks of Britain were accumulated?
16. What are the distinguishing characters of *Archæopteryx* and *Ichthyosaurus*?

SECTION D.—Department of Engineering.

DYNAMICS.

3rd November, 1891 — 1 to 4 o'clock.

1. Form, in polar coördinates, the differential equation of the path of a particle under central acceleration.

Integrate it for the special case of acceleration inversely as the cube of the distance. What is the common characteristic of all circular paths described about such a centre?

2. Investigate the resultant of two uniform circular motions in one plane:—giving the full interpretation in the special case when the circles are equal, and the angular velocities *nearly* equal, but of opposite signs.

3. Investigate the motion of a projectile in a vertical line, the resistance being as the square of the speed. Calculate the initial speed so that the height reached may be 300 feet:—the resistance being such that (with $g=32$) the *terminal* speed is 80 feet per second.

4. A uniformly dense regular tetrahedron rests, with coefficient of friction 0·5, on a horizontal plane. Find the magnitude and direction of the least horizontal force which, applied at its vertex, will displace it in any way; and those of the greatest horizontal force, which can be applied at the same point without producing displacement.

5. Find the average force under which a mass of 0·1 lb. will acquire a speed of 400 feet per second in 0·0001; and find through what space this force must act.

6. A uniform chain, 50 feet long, and of mass 1 lb. per foot, is stretched between two points at the same level. Find the horizontal tension and the distance between the ends when the vertex is (1) 1 foot, (2) 1 inch, below their level.

7. Show that a homogeneous strain is completely determined by *nine* independent data, which are reduced to *six* when the strain is pure.

	0	1	1
Analyse, fully, the strain	1	0	1
	1	1	0

8. Find the position of the centre of inertia of the portion of a uniform sphere enclosed between two parallel plane sections.

Find the locus of the centres of inertia of the portions into which a sphere is divided by a plane passing through a given internal point.

9. Show how the rigidity of a homogeneous isotropic solid can be measured by means of the torsion of a cylinder.

10. Find the (gravitation) attraction of a homogeneous solid cylinder, whose length is equal to its diameter, on a particle at the centre of one end. If the cylinder be of lead (say of twice the mean density of the earth) find its length so that the attraction may be 0·000001 of the weight of the particle.

11. Find the centre of pressure on a vertical circular disc immersed in water, showing how its position varies with the depth to which the centre is immersed.

12. Find the greatest rate of diminution of temperature with altitude which is consistent with atmospheric stability.

9th April 1892.—1 to 4 o'clock.

1. A particle is projected from a given point, in a given vertical plane, and with a given speed. Find the locus of the point at which it is moving perpendicularly to the direction of projection.

2. Show, by any process, from Kepler's First and Second Laws, that the force on a planet is central and inversely as the square of its radius-vector.

3. Find the condition of stable equilibrium of a rocking-stone, and the time of its vibration, when the portions of surface in contact are both spherical.

4. Find the co-efficients of homogeneous strain for any small portion of a uniform cylindrical rod, subject to torsion only.

5. Define the rigidity of a homogeneous isotropic solid; and investigate fully the extension of a rod of such a solid, subjected to a uniform longitudinal tension (P per square inch of cross-section).

6. Neglecting the thermal effects, calculate the rate at which a wave of extension would be propagated along such a rod:—*i.e.*, as in setting a distant railway-signal by means of a long iron wire.

7. A cylinder, of heterogeneous material, lies horizontally on an inclined plane: find the condition which determines whether it will slide, or roll, down when the plane is sufficiently inclined.

8. Three smooth cylinders, of different radii, are tied together by a string wound round them. Find the pressure between each two.

9. Calculate the rate at which a cylinder, of uniform material, will roll obliquely down a plane sufficiently rough to prevent sliding.

10. Find the ratios of the masses which must be attached at three points of a light string eight feet long, and the positions of its (fixed) ends, so that it may hang as half of a regular octagon. Is this a determinate problem? Give the reason for your answer.

11. Calculate the areas of successive horizontal sections of a Gothic pendant, so that its strength may everywhere be proportional to the stress.

12. A cylindrical boiler, of uniform material, has its ends portions of spheres of given radius. Calculate its strength as regards ripping the sides, or ends, or blowing off one end, by internal hydrostatic pressure.

13. Show that in non-rotating motion of an incompressible liquid, the pressure is least where the speed is greatest; and give instances of this in practice.

14. Assuming that air follows Boyle's and Charles' Laws, find the utmost rate of fall of temperature (per foot of elevation) which is consistent with equilibrium.

ENGINEERING.

Wednesday, 4th November 1891.—11 to 1 o'clock.

1. Explain the cause of curving in iron castings. In the case of beams, how may this curvature be allowed for and neutralised in the foundry?

2. Describe clearly the method of ranging and setting out of tunnels. Explain the use of a shield in driving a tunnel.

3. How would you adjust the line of collimation in a Transit Theodolite? Describe the method of ranging straight lines with the instrument?

4. Find the moment of inertia of a beam of **I** section:—Bottom flange, 8 in. broad by 2 in. thick; top flange, 4 in. broad by $1\frac{1}{2}$ in. thick; web, 10 in. by 1 in. thick. If it be of cast iron, what would be a safe distributed load for such a beam for a span of 20 ft.? State the modulus of elasticity and factor of safety employed.

5. What is the use of a waste weir in connection with a reservoir? The sill of a waste weir is 75 ft. wide and 2.25 ft. below the height of the still water surface. What is the quantity of water passing per minute?

Answers must, as far as possible, be illustrated by figured sketches or diagrams.

Wednesday, 4th November 1891.—2 to 4 o'clock.

1. Explain the meaning of the terms displacement and reserve of buoyancy, in relation to floating bodies. How may the vertical motions of a submarine boat be controlled?

2. Define "Meta Centre," and show how it is found. A cigar-shaped vessel of circular section weighs 1200 tons, is 24 ft. in diameter, has a depth of flotation of 6 ft., and the centre of gravity of the vessel, when upright, is 2 ft. above the water line. What will be the righting moment when she is heeled over 45° ? Will a ship of this section be crank or stiff under sail?

3. A wire rope weighs 5 lbs. per foot, and is stretched between supports 100 ft. apart. It has a dip of 2 ft., and the weight of each foot of span may be taken as approximately equal throughout. Calculate the

stress on the rope at the saddles. Neglecting the weight of the rope, and supposing the span to be the same, but one support to be 20 ft. higher than the other, and the rope 5 ft. longer than before, find the points at which a weight of one ton, travelling along the rope by a pulley, will come to rest, and also the stress on the rope at the point in question. Check your answer graphically. Will the pull on the hauling rope affect the stress on the bearing rope?

4. Describe some methods of stiffening suspension bridges.

5. An engine fly-wheel, 12 ft. in diameter, is required to make 100 revolutions per minute. The variation of the resistance and force applied to the crank is equal to 10,000 foot-pounds of energy in the wheel. The velocity is not to vary more than $2\frac{1}{2}$ per cent. from the mean velocity of the 100 revolutions per minute. What must be the weight of the wheel rim?

Answers must, as far as possible, be illustrated by figured sketches or diagrams.

Thursday, 5th November 1891.—11 to 1 o'clock.

1. By a force of 100 lbs., transmitted along the piston rod, water is sent through a $\frac{1}{8}$ " circular orifice in the $\frac{1}{4}$ " wall of a cataract cylinder, 3" diameter. Find the time of making a complete stroke of 6 inches.

2. Explain the action and functions of the "steam jacket," as used in compound engines, and also the relative advantages of using it for the high and low pressure cylinders respectively. On what types of engine is the steam jacket most likely to be economical, and why?

3. An overhanging crank has a pin 5" long, and 4" diameter. Find the centrifugal force developed by this pin when the engine is running at 200 revolutions per minute. Show also how such a pin may be completely balanced by two weights on the same side of the crank, and exhibit the necessary calculations.

4. Discuss the relative advantages of reciprocating and centrifugal pumps for high and low lifts, and where small or large quantities of water have to be dealt with.

5. Supposing you were supplied with the usual plans of a proposed railway, describe how you would proceed to set out the centre line on the ground. Also, if one of the curves of the railway is 20 chains radius, the distance of the commencement of the line to the point of intersection of its tangents 522.3 chains, and the angle between the tangents 100° , make the necessary calculations for setting it out, and describe how you would do so with a chain and theodolite.

Answers must, as far as possible, be illustrated by figured sketches or diagrams.

Thursday, 5th November 1891.—2 to 4 o'clock.

1. State the necessary precautions to be taken in levelling operations in order to prevent errors arising from curvature and refraction. If a level be placed at A, and the readings on the staff, held at successive

points, B, C, and D, are respectively 1.80, 3.20, and 5.26; and the level be then moved to a further point, E, where the readings, taken on the staff held at D and F respectively, are 8.37 and 4.68; make and balance the note-book, the reduced level of B being 526.78.

2. A wrought-iron roof-truss has a rise of 8 feet, and a span of 40 feet. It consists of two continuous rafters, AB and BC, and a tie consisting of three rods, AD, DE, and EC. D and E are connected with the apex B, by rods equal in length to AD and EC, and D and E are joined by other rods to the middle points of AB and BC. DE is one foot above AC. The truss carries a load of 150 lbs. per horizontal foot of span. Determine graphically the nature and magnitude of the stresses in each of its members.

3. Steam is admitted to the cylinder of a high pressure engine at a pressure of 40 lbs. per square inch. The ratio of expansion is 3, the back pressure 4 lbs., and the piston speed, 400 feet per minute. Find the diameter of the piston, and the quantity of steam used per minute, supposing the I.H.P. is 15. $\text{Log. } 3 = 1.0986$.

4. Describe the steam engine indicator, noticing the sources of error in the diagrams it gives, and state what types of indicator are best for low, medium, and high speeds respectively. Also describe with minuteness the process of calculating the I.H.P. of an engine from a set of diagrams and other necessary data.

5. What load may safely be put on a timber strut 8'. 8" long, and 4" square, supposing both ends are (a) fixed, (b) free? Safe crushing stress = .75 tons per square inch.

Answers must, as far as possible, be illustrated by figured sketches or diagrams.

DRAWING.

Friday, 6th November 1891.—10 to 1 o'clock.

PLAIN GEOMETRY.

1. Within a parallelogram, whose sides are 3 inches and 6 inches respectively, and which are inclined to one another at an angle of 70° , inscribe an ellipse.

2. An equilateral triangle described on a piece of level ground contains an area of exactly $1\frac{1}{4}$ acres. Draw a plan of this plot of land to a scale of one chain to the inch.

3. A circle has a radius of 2 inches. Draw the involute; and also the epicycloid formed by a rolling circle of 3 inch radius.

SOLID GEOMETRY.

1. A line, which is inclined at 40° to the horizontal plane, and whose projection on that plane makes an angle of 50° with the ground line (or $x\ y$), is the line of intersection of two planes, the vertical traces of

which make angles of 45° and 90° with the ground line respectively. Find both traces of each of the planes, and the angle between the planes.

2. A right circular cone of 2 inch base radius, and whose altitude is 5 inches, is intersected by a plane inclined to the horizontal at 60° , and entering at 1 inch from the apex of the cone. Draw the projections of the section, and develop the surface of the cone so as to show the section. The cone is supposed to be vertical.

3. Draw an isometric projection of a simple flange coupling joining the ends of two shafts. Dimensions—

Shafts—3 inch diameter.

Couplings—Flanges, 11 inch diameter ; $1\frac{1}{4}$ inch thick.

Boss, 5 inch diameter ; 7 inches deep from face of coupling.

2 to 5 o'clock.

From one or other of the figured sketches supplied—(1) Queenpost Truss for Roof ; (2) Spur Wheel for Crane—make the detailed drawings indicated.

Inking in is unnecessary.

ENGINEERING.

Monday, 4th April 1892.—11 to 1 o'clock.

1. Supposing that, from a base line AB 12,753 feet in length, the position of C were determined by measuring AC and BC ($AC=14,471$ and $BC=10,742$), and that afterwards the angles ABC and BAC, being measured, were found to be $75^\circ 30'$ and $45^\circ 56'$ respectively ; what must have been the error in the measurement of the two lines ?

2. A two-cylinder crab engine has cylinders 10" diameter and 10" stroke ; the pinion wheel on the crank shaft has a 12" pitch circle, and drives a spur-wheel of 4 feet pitch circle, which is attached to the shaft of a rope-drum 4' 6" diameter. The initial steam pressure is 40 lbs. per square inch, and is cut off at half stroke. Find the H.P. of the engines when running at 100 revolutions per minute, and also the weight that can be lifted under these conditions. $\log 2=.6931472$.

3. A circular chimney shaft is 150 feet high ; internal diameter 4 feet throughout ; external diameter 12 feet at the bottom, and 7 feet at the top. If brickwork costs £1 per cubic yard, estimate the total cost of the brickwork.

4. Investigate formulæ for finding the "principal stresses" and "planes of principal stress" in a bolt under a compound tensile and shearing stress. A bolt of this kind is subjected to a shearing stress of 6 tons per square inch, and a tensile stress of 5 tons per square inch. Find the principal stresses.

5. A hundred horse-power is transmitted from a 5-foot pulley on one shaft to a 5-foot pulley on another shaft, by means of an open belt run-

ning at 300 revolutions per minute. The belt has a thickness of $\frac{3}{8}$ ", and a width of 12"; its working strength being 320 lbs. per square inch for safety. Find the co-efficient of friction between the belt and the pulleys.

NOTE.—Answers should, as far as possible, be illustrated by figured sketches or diagrams.

Monday, 4th April 1892.—2 to 4 o'clock.

1. Describe the methods, and the necessary instruments, employed in connecting the survey of a mine with a survey of the surface of the ground above.

2. The vertical shaft of a turbine works in a foot-step bearing. The journal is 3" diameter, and has a plane end. The weight upon the bearing, due to the shaft, &c., is 10 cwt., and the co-efficient of friction $\frac{1}{20}$. Find the work lost by friction per minute when the turbine-wheel makes 100 revolutions in that time.

3. A Warren girder has a span of 100 feet, and the bottom boom has five bays, each being the base of an equilateral triangle. The live load, which is carried by the top boom, is $1\frac{1}{2}$ tons per foot run, and the dead load—distributed equally between the upper and lower booms—is 1 ton per foot run. Determine graphically the stresses in the three bars forming the centre triangle, and check the result by calculation.

4. A pitch pine beam, 12" square and 12 feet long, has a weight of 15 tons hung at its centre. Find the maximum tensile strain induced in the material, and also the deflection, the co-efficient of elasticity being 500 tons per square inch.

5. From the indicator diagrams and data regarding the brake observations supplied, determine the mechanical efficiency of the compound engine to which they refer.

NOTE.—Answers should, as far as possible, be illustrated by figured sketches or diagrams.

Tuesday, 5th April 1892.—10 to 1 o'clock.

1. Your surveying level having got out of adjustment both as to bubble and hairs, describe how you would readjust it.

2. (a.) Calculate, in gallons per day, what quantity of water may be got off an area of 1460 acres, when the average rainfall, as measured by rain-gauge for the last sixty years, is 43 inches; allowing 14 inches for loss by evaporation, and assuming that the average of three dry years is one-fifth less than total average.

(b.) How much of this would be available for water-supply, and how much for compensation to the stream, and what population would it supply with thirty gallons per head daily?

3. (a.) What diameter of cast-iron pipe would be required to carry to the site of the filters and service reservoir, the quantity of water

yielded in 2 (a), the distance being sixteen miles, and the difference of level 317 feet?

(b.) A portion of this main has to stand a working pressure of 400 feet. What should be its thickness?

4. (a.) How many gallons should be allowed to pass through a square yard of filtering surface in twenty-four hours?

(b.) Make a sketch showing arrangement of filtering material in a good filter, and show how the rate of filtration is regulated.

5. (a.) Calculate the horse-power required to pump up 500,000 gallons, per day of ten hours, to a reservoir two miles distant, with a lift of 180 feet, and a rising main of 12 inches diameter.

(b.) What difference would it make in the horse-power if the rising-main were 16 inches diameter, and had two 45° bends of 5 feet radius on it?

NOTE.—Answers should, as far as possible, be illustrated by figured sketches or diagrams.

Tuesday, 5th April 1892. —2 to 4 o'clock.

1. Describe the various methods and instruments employed in calculating the areas of a survey. Having a plan without a scale on it, and only one dimension figured, viz., "A to B=476 feet," what is the easiest way to make a proper scale?

2. In drainage works, describe the use of manholes and lampholes, and make a sketch of a suitable example of each for a sewer 15 inches diameter.

3. Describe the manner of founding the masonry pier of a two-arch bridge crossing a river 150 feet wide; the centre pier being in 6 feet of water and 4 feet of silt, overlying strong clay. Give suitable proportions of Portland cement concrete for making the foundations, and describe the different ways in which the quality of the cement is tested, stating the object of each.

4. Mention the various methods of determining the amount of water flowing in streams of, say, 6 feet wide and 2 feet deep, with rapid and sluggish currents; and also for large rivers 200 feet wide and 20 feet deep.

5. Calculate the effective horse-power that can be got from a stream passing 500 cubic feet per minute over a fall of 10 feet, by means of

(a) An overshot wheel.

(b) An undershot wheel.

(c) A free deviation turbine.

Explain fully the advantages of using the last mentioned machine.

NOTE.—Answers should, as far as possible, be illustrated by figured sketches or diagrams.

DRAWING.

Wednesday, 6th April 1892.—10 to 1 o'clock.

PLANE GEOMETRY.

1. Two points, A and B, are $2\frac{1}{4}"$ and $1\frac{3}{4}"$ respectively distant from the centre of a circle $1\frac{1}{2}"$ radius, and are $3\frac{3}{4}"$ distant from each other. Draw a circle to pass through A and B and to touch the given circle.

2. Draw the curve traced out by a point $1\frac{1}{2}"$ distant from the centre of a circle 4" diameter when the circle rolls upon a straight line, and draw a normal at a point in the curve 2" above the lowest point.

3. In the pencil motion of the Tabor indicator, to a fixed point A is linked a rod AB $1\frac{1}{2}"$ long, B being above A. To B is linked BC $3\frac{3}{4}"$ long, C being to the left of B. From D in BC $\frac{3}{4}"$, from B hangs a link DE $1\frac{1}{4}"$ long, E being linked to the head of a vertical piston rod whose line of action is $\frac{3}{4}"$ to the left of A. As E travels in a vertical straight line, it is required that C should also traverse a vertical straight line $3\frac{1}{2}"$ long and $3\frac{1}{2}"$ to the left of A. Find what curve a point F in BC, $1\frac{1}{8}"$ from B, must be constrained to follow so that C may traverse the required straight line.

SOLID GEOMETRY.

1. Lines making 50° and 40° with the XY are the horizontal and vertical traces respectively of a plane inclined to both planes of projection. Determine the angles of its inclination to each plane of projection; also draw the plan and elevation of a line perpendicular to the given plane, and meeting it in a point 2" above the horizontal plane and 1" from the vertical plane.

2. A triangle, $1" \times 1\frac{1}{4}" \times 1\frac{1}{2}"$, lying in the horizontal plane, represents the section made by the horizontal plane in cutting off one of the corners of a cube 3" side. Complete the plan and elevation of the cube.

3. The top of a vertical solid cylinder, 1" radius, is cut off by the surface of a thin horizontal cylinder, 2" radius, whose axis is $\frac{1}{2}"$ distant from the axis of the vertical cylinder. Draw the development of the section.

4. Draw the isometric projection of a Lancashire boiler, 30' long by 7' diameter. The flues are 3' diameter, and their centres are 3' 4" apart and 8" below the centre line of the boiler. Scale, $\frac{1}{4}" = 1$ foot.

Wednesday, 6th April 1892.—2 to 5 o'clock.

From one or other of the figured sketches supplied—(1) A hydraulic accumulator; (2) lower part of a bridge pier—make the detailed drawings indicated. The drawings should be fully dimensioned.

NOTE.—Inking is unnecessary.

SECTION E.—**Department of Public Health.**

MEDICINE.

Monday, 6th July 1891.—11 to 1 o'clock.

1. Describe the morbid anatomy and the clinical history of a chronic and an acute disease affecting the lungs in certain trades.
2. Enumerate the chief varieties of trade spasms, and describe one of them, indicating the treatment which you would recommend.

SANITARY LAW AND VITAL STATISTICS.

Monday, 6th July 1891.—2 to 4 o'clock.

ADULTERATION ACT.

1. What are the formalities to be observed in purchasing an article with the intention of submitting it to analysis?

DAIRIES, COW-SHEDS, AND MILK-SHOPS ORDER.

1. Who are the persons exempted from registration under this order?

2. What regulations may a Local Authority make in reference thereto?

State what sources of error may vitiate the estimation of the population of large towns at inter-censal periods?

PRACTICAL SANITATION.

FIRST PAPER.

Tuesday, 7th July 1891.—11 to 1 o'clock.

AN OUTBREAK OF ENTERIC FEVER OCCURS IN A DISTRICT :

1. To what causes may it be due?
2. What directions would you give to prevent its spreading?

SCARLET FEVER BREAKS OUT IN A COUNTRY HOUSE :

1. State in detail the instructions you would give to prevent the further spread of the disease.
2. At what period, and after what precautions, would you consider the infection at an end?

THE HOUSES OF THE WORKING CLASSES ACT.

BUILDINGS UNFIT FOR HUMAN HABITATION :

1. What are the duties of the Medical Officer of Health under this section?
2. Who else can set this particular section in motion?

PRACTICAL SANITATION AND DRAWING.

Tuesday, 7th July 1891.—2 to 5 o'clock.

1. A moderate-sized house is to be built on a gravelly soil. There being no public sewer within reach, describe fully, with sketches, what sanitary arrangements you would recommend.

2. The accompanying figured sketch (No. 1) is a single Through C. I. Water Closet, such as is used in factories and schools, and is intended to be discharged once a day. Draw, on a scale of 3 in. to the foot, and to the dimensions given, a front elevation and plan, and a longitudinal section on BB. Show the lid down, and indicate the sort of apparatus you would expect to find in the supply and discharge tanks respectively. The metal is $\frac{3}{8}$ in. thick.

3. State fully how you would conduct an inquiry into the sufficiency of the ventilation of an hospital. Describe the nature and mode of use of the instruments you would employ, and mention the general character of the calculations you would think it necessary to make.

4. Criticise the sanitary arrangements of the house, as generally indicated in the accompanying sketch, and make such suggestions for their extension and improvement as may occur to you.

5. A certain catchment-basin area having been selected for the water supply of a large manufacturing town, give (a) An account of the information it would be needful to accumulate before any of the necessary works could be designed; (b) A description of the character of those works; (c) A sectional view of the main dam of the storage reservoir, showing its mode of construction, with valve-pit, culvert, &c.

All Candidates must attempt Question 2. Drawings and Sketches may be made in pencil.

SECTION F.—Department of Agriculture.

AGRICULTURE.

Friday, 16th October 1891.—9 to 12 o'clock.

1. What pure breeds of cattle are best adapted for dairy purposes, (a) for cheesemaking, and (b) for buttermaking or the milk trade?

2. What is the difference in the value of the butter produced by a large shorthorn, giving an average yield of 800 imperial gallons of milk during the year, and that of a tiny Jersey, whose average yield is only 450? Estimate the cost of keep of each and the value of the by-products, and show the result.

3. What are the best breeds of cattle for a mixed occupation, where the farm is self-supporting, and the young stock fed off at the age of two years? Give reasons for your answer.

4. Describe the best system of feeding and management of the animals referred to in question 3 from birth, the best method of housing, the

quantities and feeding ratios of the foods you recommend, and the results produced on the development of the animals.

5. How would you manage a breeding flock on a lowland farm with a view to profit? How should the "hogs" be wintered; at what age should they be ready for the butcher; what do you expect them to weigh live weight?

6. Can the caseine of milk be appreciably increased by the use of special foods? If so, name the varieties of food and enumerate their chief chemical constituents, with the quantities you recommend.

7. Can the butter fat in milk be increased by the foods used? If so, name the more important varieties for this purpose. Describe their chemical composition, and the quantity per diem you recommend.

8. Do you approve of the use of roots for cows in milk; if so, in what state of preparation, and give reasons why? What quantity per day do you recommend?

9. What is the cheapest and best method of storing the root crop? At what season of the year should mangel-wurzels crop be used? What is their feeding value compared with swedes?

28th March 1892.—9 to 12 o'clock.

1. Describe the recognised natural sources of nitrogen. How is it combined in the soil for the use of plants? At what depth is nitrification most active, and what conditions are most favourable to its development?

2. What rotation would you recommend for a strong land farm in the Lothians, or in a district you will name, with a view to obtaining maximum produce at minimum cost, without deteriorating the land? State the probable yield of corn, of hay, and of straw, and also the kinds and quantities of manures you would apply to the different crops.

3. What are the practical advantages of the cultivation of leguminous crops where the soil and climate are suitable? What crop-plants would you recommend for cultivation as catch crops? How would you dispose of them, and what benefits would the land derive by their growth? What effect has the ploughing in of succulent green crops on the soil?

4. Estimate the average cost of producing a root crop on a good turnip soil, and state the yield per acre. How much beef or mutton will a ton of swedes produce?

5. Describe the best mixtures of foods for a two-year-old fattening bullock; name the quantities of each. State their values, and show an albuminoid ration of not less than one to five. Under this system of feeding how much will the animal increase in live weight per day?

6. How much water will a cow require per day when in full milk during the winter months; include in your calculation the water contained in the different kinds of food consumed? What is the difference in value, if any, of water in combination with feeding stuffs as compared with drinking water?

7. What solids exist in an average sample of milk?
8. What class of horse is most likely to pay the farmer best for breeding and rearing? State the cost (including service fee and insurance) when the animal has arrived at the age of three years.
What is the most suitable kind of farm for horse breeding?
9. Describe the management of a Cheviot ewe flock on a farm situated in a Border county, or of a flock of ewes in the district with which you are most familiar.
10. What will an average shorthorn dairy cow cost per week throughout the year, the food being chiefly produced on the farm? State the kinds and quantities of food, and the probable values. How many weeks should the cow milk during the year? What should be the gross yield in imperial gallons, and its value at the homestead as raw milk? Contrast this with its value for the production of cheese or butter, estimating the value of the by-products.

CHEMISTRY AS APPLIED TO AGRICULTURE.

Thursday, 15th October 1891.—9 to 11 o'clock.

1. Describe the main differences between peaty, sandy, and clay soils, in respect of their powers of retaining water, absorbing heat, and favouring evaporation.
2. Give an instance of the selective power for food which is exercised by plants, and explain how the action can be carried out.
3. Distinguish between the chief requirements of a cereal and a grass crop in the matter of manure.
4. What considerations, besides that of chemical composition, have to be taken into account in estimating the value and utility of a feeding material?
5. What products of the distillation of coal may be used for agricultural purposes? Describe briefly their preparation and method of use.
6. Assuming the annual yield of a cow to be 500 gallons of milk, and this to be sold off the farm, what amounts of nitrogen and mineral matters would this represent as being removed, and of what would the mineral matter consist?

29th March 1892.—10 to 12 o'clock.

1. What is a "double silicate"? What double silicates are found in soils, and what chemical and physical properties do they impart to soils?
2. What are the principal raw phosphatic materials used in agriculture which are produced in Great Britain and not imported? Give their general composition.
3. In replacing a dressing of 20 tons of farmyard manure by artificials, what amounts of Sulphate of Ammonia, Kainit, and mineral superphos-

phate of lime (say 26 per cent. soluble phosphate) would be required? In what respects would the replacement not be complete?

4. In the case of a plant capable of producing both seed and fibre as commercial products, what circumstances would favour the development of one or the other product, and what differences of treatment of the crop should be observed?

5. What similarities and differences exist between blood and milk?

6. Give some guiding reasons for insisting on the purity of feeding materials, and exemplify your reply by the case of linseed-cake.

VETERINARY HYGIENE.

Thursday, 15th October 1891.—1 to 3 o'clock.

1. What are the causes and symptoms of bone diseases in young animals? Suggest their prevention.

2. Describe the conformation in cattle indicative of delicacy of constitution and predisposition to disease.

3. Describe the best methods of feeding farm horses during the "off" and the "on" seasons, the quantities of the various articles of diet, and approximately their relative nutritive value.

4. Describe an ideal stable, also a byre, in reference to situation, construction, ventilation, drainage, light, and fittings.

5. State what you know of the characters of land in reference to the production of animal diseases, also what steps you would take to render unhealthy land salubrious.

6. State in what way water becomes contaminated and unfit for drinking purposes for animals, the effects of impure water on animals, and the methods you would adopt to render impure water fit for drinking purposes.

29th March 1892.—1 to 3 o'clock.

1. Enumerate the diseases of animals, the tendency to which is known to be hereditarily transmitted from sire or dam to the offspring, and also give a brief note of defects of conformation which are liable to be so transmitted.

2. Give the symptoms of Foot and Mouth Disease in cattle and sheep, and state what steps you would take to arrest its progress in the event of an outbreak occurring amongst your own stock.

3. Give the known causes and the symptoms of abortion, with the period of gestation, in man, cow, ewe, and sow respectively.

4. Explain the digestion of proteids and starches.

5. Name the seats of the most common unsoundnesses met with in the horse.

6. State the precautions necessary to prevent the spread of Pleuropneumonia, Anthrax, and Glanders.

ENGINEERING.

Friday, 9th October 1891.—10 to 1 o'clock.

1. State and explain the second law of motion. Determine through what distance a force equal to the weight of $\frac{2}{3}$ lb. must act on a mass of 64.4 lbs., so as to increase its velocity from 20 to 36 feet per second.

2. A block of stone weighing one ton is placed on a pedestal weighing four tons, supported by a base weighing six tons. The centre of gravity of the block is 20 feet, that of the pedestal 12 feet, and of the base 2 feet from the ground. Find the height of the centre of gravity of the whole.

3. What is the least force that will drag a mass of two tons up a rough plane inclined at 60° to the horizon; the friction being such as would prevent the same mass slipping down the plane if it were placed at an inclination of 30° ?

4. What is a Vernier, and what are its uses? Explain fully how you would construct a Vernier so as to read to twenty seconds.

5. Describe in detail how you would set out a curve of twelve chains radius without the aid of an angular instrument.

6. Discuss the relative advantages of the under and overshot water-wheel. A breast wheel is 50 feet diameter, and receives 5000 gallons of water per minute, with a total fall of 48 feet. How many revolutions must the wheel make so that the peripheral velocity may be 5 feet per second? If the H.P. is 52, what is the efficiency?

7. Describe the hydraulic press, and explain the action of the cup-leather packing. Suppose the diameter of the plunger and the ram are $\frac{3}{4}$ inch and 10 inches respectively; that the arms of the lever are 6 feet and 4 feet, and that a weight of 20 lb. is hung at the free end of the lever, what will be the pressure on the ram?

8. A cylindrical tank, 20 feet diameter, is made of $\frac{1}{2}$ -inch W.I. plates. If the stress on the metal is not to exceed 4000 lbs. per square inch, what is the greatest depth of water the tank must contain?

9. Describe the process of preparing clay for making bricks, and explain how they are dried and fired. What are the characteristics of a good brick?

10. Define the "lap" of a slide valve, and account for the difference of the working of two engines, one of which has "lap" on the steam side of this valve, and the other has not. Why is "lead" given to the slide valve?

11. Describe—(a) Portland cement, (β) white fir, (γ) cast iron, and give an account of their several uses.

12. Sketch a timber Queen post roof truss of the ordinary form, and explain clearly the function of each of its parts.

Answers must, as far as possible, be illustrated by sketches and diagrams.

Monday, 28th March 1892.—1 to 4 o'clock.

1. How would you set about making a survey of a small farm? Explain the various methods employed in the calculation of areas.

2. Describe the Circumferenter, and state to what classes of work it is specially suited. In what respect does it differ from the Prismatic Compass?

3. What is the precise relation between the mass of a body, a force, and the acceleration of the velocity of the body produced by the force?

A force acting on a mass of 5 lbs., increases its velocity in every second by 12 feet a second; another force acting on a mass of 28 lbs., increases its velocity in every second by 7.5 feet per second; what is the relation of the one force to the other?

4. State what is meant by "the rectangular components of a force."

A force of 50 units acts along a line at an angle of 30° to the horizontal; find its horizontal and vertical components. The force and its two components thus found being in a vertical plane, find also the components of the force of 50 units along two lines in that plane at right angles to each other, and inclined at angles of 45° to the horizontal.

5. Define "centre of fluid pressure" in relation to a plane area. Suppose the area to be a rectangle, with one edge in the surface of the fluid, where is the centre of pressure?

6. The piston-rod of an engine is made of steel, and is 8 inches in diameter and 9 feet long. The cylinder of the engine is 88 inches in diameter, and the effective steam pressure is 40 lbs. per square inch. Calculate the stress produced on the rod, and the amount by which its length will be altered during one revolution of the engine. ($E=29,000,000$).

7. A load of two tons is uniformly distributed over one-half the horizontal member of a simple triangular truss, 10 feet span and 3 feet deep, supported at both ends. Find the stress on the bars.

8. What is the pitch-circle of a toothed wheel? Two parallel axes are at a distance of 10 inches, and are required to rotate with a velocity ratio of 2 to 3. What must be the diameter of the pitch-circles so as to give the necessary motion, and how many teeth must there be on each wheel?

9. A water-way is of rectangular section, 30 feet wide by 5 feet deep, and falls 18 inches per mile. Supposing the co-efficient of friction is .012, what will be the velocity of flow in it?

10. Describe Thomson's "Calorimeter," and explain what bearing calorimetric determinations have upon the question of boiler efficiency.

11. Supposing you were required to ascertain the actual horse-power given out by a portable engine, describe some simple piece of apparatus that would enable you to obtain the needful data, and show how, from these, you would deduce the horse-power developed.

12. Explain the terms—Clearance, Ratio of Expansion (real and apparent), Priming—in connection with the steam engine, and point out what bearing they have upon economy of working.

NOTE.—Answers should, as far as possible, be illustrated by figured sketches or diagrams.

Degrees in Science.

DOCTORS OF SCIENCE.

The names of all the Doctors of Science of this University, previously to 1889, will be found in the Historical Appendix to List of Graduates published in 1889, pp. 132-134. The following are the names of the Doctors from 1888 to 1892, both years included :—

A. DEPARTMENT OF MENTAL SCIENCE.

- 1891. William Mitchell, M.A.¹
- „ Robert Mark Wenley, M.A.
- 1892. Charles Mackinnon Douglas, M.A.²
- „ James Lewis M'Intyre, B.A.

C. PHYSICAL AND NATURAL SCIENCE.

a. Department of the Mathematical Sciences.

- 1888. William Peddie.³
- 1890. Alexander Crichton Mitchell.⁴

b. Department of the Physical Experimental Sciences.

- 1888. James Burgess Readman (Chemistry).
- 1889. Thomas Rhymer Marshall (Chemistry).
- 1890. Hugh Marshall.⁵
- 1891. William Cossar Mackenzie.⁶
- „ Thomas Smith Murray.

D. DEPARTMENT OF ENGINEERING.

- 1888. Archibald Campbell Elliott.⁷

E. DEPARTMENT OF PUBLIC HEALTH.

- 1888. John Berry Haycraft, M.D.
- 1890. James Anderson, M.D.
- „ James Andrew Blair, M.B.
- „ William John Brock, M.B.
- „ John Stevenson, M.B.

¹ Lecturer, F.C. College, Aberdeen.

² Assistant to Professor of Moral Philosophy.

³ Assistant to Professor of Natural Philosophy.

⁴ Professor of Mathematics, Travancore.

⁵ Assistant to Professor of Chemistry.

⁶ Professor of Chemistry, Ghizeh, Egypt.

⁷ Professor of Engineering, Cardiff.

Degrees Conferred in 1891-92.

THE DEGREE OF DOCTOR OF SCIENCE.

In the Department of Mental Science.

April 1892.

Charles Mackinnon Douglas, M.A.

Thesis—"Nature and Spirit; the Problem of their Relation in Experience."

James Lewis M'Intyre, B.A.

Thesis—"Spinoza and Hegel."

In the Department of Public Health.

Charles Henry Bedford, M.D., B.Sc.

Thesis—"On the History, Etiology, and Prophylaxis of Indian Enteric Fever."

THE DEGREE OF BACHELOR OF SCIENCE.

In the Department of the Mathematical Sciences.

1st August 1891.

James Crocket, M.A.

14th April 1892.

John Forbes, M.A. | James Mitchell, M.A. | John Turner, M.A.

In the Department of the Physical Experimental Sciences.

1st August 1891.

Robert Andrew Scott Macfie,
B.A.

Theodore Rettie.
Alexander Dingwall White.

14th April 1892.

Herbert William Bolam.

William Wishart, M.A.

In the Department of the Natural Sciences.

1st August 1891.

Alexander Bremner, M.A.

John Charles Mitchell.

George Steuart Corstorphine.

Gregg Wilson, M.A., B.D.

14th April 1892.

Robert Stewart M'Dougall, M.A.

In the Department of Engineering.

28th November 1891.

John Archibald Purves.

14th April 1892.

Ernest George Coker.

Alexander Gilfillan.

Charles Arthur Richards Farrell.

George Harold Stevenson

In the Department of Public Health.

1st August 1891.

Robert Cattley, M.B., C.M.	Alexander Cruikshank Houston,
Carstairs Cumming Douglas,	M.B., C.M.
M.B., C.M.	James Smith, M.B., C.M.
Henry Charles Gordon, M.D.	Hector M'Lean Wilson, M.D.

14th April 1892.

Charles Templeman, M.D.

In the Department of Agriculture.

14th April 1892.

John Kennedy Borland.	Edwin Alexander Fulton.
John Campbell.	James Scott Gordon.
Thomas Askew Coward.	Marie Jean Louis Ernest Rouil-
Percy Hedworth Foulkes.	lard.

Fellowship, Scholarships, Bursaries, Prizes, &c., in Science.

I.—FELLOWSHIP, &c.

THE FALCONER MEMORIAL FELLOWSHIP.

This Fellowship was founded in 1869 by the Subscribers to the Fund for a Memorial to Hugh Falconer, M.D. (for many years Superintendent of the H. E. I. Company's Botanic Gardens at Suharunpoor and Calcutta), and the Association for the better Endowment of the University of Edinburgh. It is of the annual value of £111, 0s. 4d.; and is for the encouragement of the Study of Palæontology and Geology. It is tenable for two years, but if the Senatus see fit, it may be held for three years, and with consent of the University Court, for four years, and is awarded after competitive examination in Natural History as applied to Palæontology and Geology. It is open to Graduates in Science or Medicine of this University of not more than three years' standing at the time of the competition. It cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University. The Deed of Foundation will be found at p. 270 of the CALENDAR for 1870-71. The next appointment will be made in July 1892.

1888. Malcolm Laurie, B.Sc.

1891. No award.

THE WILLIAM DICKSON TRAVELLING FUND.

This is a fund for the purpose of assisting Graduates of any Faculty, of not more than three years' standing, to travel for the purpose of study or research. For particulars, see p. 227.

*II.—SCHOLARSHIPS.**I.—BAXTER PHYSICAL SCIENCE SCHOLARSHIP.*

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron in 1865, and is of the annual value of £71, 7s. 10d., tenable for two years. By the terms of the Deed of Foundation (given in the CALENDAR for 1866-7, p. 203), it is awarded to the most eminent of the Bachelors in Science, who have passed their examinations in the Physical Sciences, including Experimental Philosophy and Chemistry, either in the year preceding a vacancy, or in the year in which a vacancy occurs. Amongst other conditions the second year's tenure of this Scholarship is subject to the condition that the holder shall have taken the Degree of Doctor in Science in the first year of his tenure of it. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100.

1887. Thos. B. Marshall, B.Sc. | 1890. Thos. Smith Murray, B.Sc.
1892.

II.—BAXTER NATURAL SCIENCE SCHOLARSHIP.

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1865, and is of the annual value of £71, 7s. 10d., tenable for two years. By the terms of the Deed of Foundation (given in the CALENDAR for 1866-67, p. 203), it is awarded to the most eminent of the Bachelors in Science, who have passed their examinations in the Department of the Natural Sciences, including Botany, Zoology, Physiology, and Geology, either in the year preceding a vacancy or in the year in which a vacancy occurs. Amongst other conditions the second year's tenure of this Scholarship is subject to the condition that the holder shall have taken the Degree of Doctor in Science in the first year of his tenure of it. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100.

1888. G. F. Scott-Elliot, B.Sc.

1890. Robert Murray Leslie, M.A., B.Sc.

1891. John Stewart Norwell, B.Sc., resigned.

„ Lapsed Scholarship, *James Adamson*, M.A., B.Sc.

1892. *G. S. Corstorphine*, B.Sc.

III.-VIII.—VANS DUNLOP SCHOLARSHIPS.

These Scholarships may be held by Science Students. They are each of the annual value of £100, and are tenable for three years, on condition that the scholar submits annually—(1.) A certificate of attendance on lectures or laboratories approved by the Senatus; or (2) a certificate of having acted as an assistant to a Professor in this or some

other University ; or (3) a written report of his work done during the year, together with a Thesis composed by himself in connection with some part of that work.

III.—MATHEMATICS.¹

The next Competition will take place in April 1895.

IV.—NATURAL PHILOSOPHY.¹

The next Competition will take place in April 1895.

V.—AGRICULTURE AND RURAL ECONOMY.¹

The next Competition will take place in March or April 1895.

VI.—CHEMISTRY AND CHEMICAL PHARMACY.²

The next Competition will take place in April 1894.

VII.—NATURAL HISTORY, INCLUDING GEOLOGY AND BOTANY.²

The next Competition will take place in April 1895.

VIII.—ENGINEERING AND MECHANICAL AND USEFUL ARTS.¹

The next Competition will take place in April 1894.

IX.—STEVEN SCHOLARSHIP.¹

Is awarded annually in March.

X.—HOPE PRIZE SCHOLARSHIP.²

Is awarded annually in March.

XI.—NEIL ARNOTT SCHOLARSHIP IN EXPERIMENTAL PHYSICS.¹

Is awarded annually in April.

XII.—THE MACKAY SMITH SCHOLARSHIPS.

These Scholarships were at first intended to have been held in Edinburgh and Glasgow Universities alternately, and were so held in Edinburgh for the Sessions 1883-84 and 1884-85, and in Glasgow for the Sessions 1885-86 and 1886-87. It was, however, afterwards arranged, instead of the Scholarships alternating between the two Universities, that the proceeds of the present investment should be divided—one half being retained by the Senatus of the University of Edinburgh, and the other half transferred to the Senate of the University of Glasgow, so that each University now acts independently. The portion of the proceeds at present falling to Edinburgh is £50.

¹ For particulars, see "Scholarships" in Faculty of Arts.

² For particulars, see "Scholarships" in Faculty of Medicine.

annually, which provides one Scholarship in Natural Philosophy and one in Chemistry, each of the annual value of £25, tenable for two years, and to be held under such regulations and conditions as the Senatus may from time to time direct. The Scholarship in Natural Philosophy is open for competition to Students who have attended the Class of Natural Philosophy, and the Scholarship in Chemistry to Students who have attended the Class of Chemistry, both in this University. The successful Candidate for the Scholarship in Natural Philosophy is bound to attend the Class of Natural Philosophy, or to prosecute the study thereof, in the University during at least one year of his tenure of the Scholarship, in such way as the Senatus may direct or approve; and the Scholarship in Chemistry is held under similar conditions as regards attendance on the Class of Chemistry, or the prosecution of the study thereof. The next Competition for these Scholarships will take place at the end of the Winter Session 1893-94.

1888. { Martin H. Foye (Chem.) A. W. Duff, M.A. (Nat. Ph.)	1890. { R. W. Briggs (Chem.) James Holm (Nat. Phil.)
1889. J. F. M'Kean, M.A. (lapsed Nat. Phil.)	1892. J. W. Horne, M.A. (Chem.)

XIII.—ROYAL COMMISSION FOR EXHIBITION OF 1851 PHYSICAL SCIENCE SCHOLARSHIP.

The Commissioners in 1891, and again in 1892, gave this University the power of nominating a Student of not less than three years' standing to a Scholarship of £150 a-year, tenable for two years, and which may be extended to three years. The Scholarship is limited to those branches of Science (such as Physics, Mechanics, and Chemistry) the extension of which is specially important for the national industries, and may be tenable in any University or other Institution to be approved by the Commissioners. See Regulations, p. 544 of CALENDAR for 1891-92.

1891. *John Shields, B.Sc., Ph.D.*

1892. *Andrew J. Herbertson.*

XIV.—THE ARTHUR TREVELYAN SCHOLARSHIP IN ENGINEERING.

The Arthur Trevelyan Scholarship in Engineering, of about £40 per annum, is for proficiency in Engineering and the Mechanical and useful Arts, under such conditions as the Senatus may prescribe. See Excerpt from Deed, page 538 of CALENDAR for 1892-93.

Of the foregoing Fellowship, Scholarships, Bursaries, and Prizes, the following are open during the Summer Session 1892 and Winter Session 1892-93.¹

¹ *N.B.*—The values of Fellowship, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c.

FELLOWSHIP.

The Falconer Memorial Fellowship, in Palæontology and Geology (No. I. p. 533). The next competition will take place on 25th and 26th July 1892 — Botany, 25th July, at 1 P.M.; Natural History, 26th July, at 10 A.M., and Geology at 1 P.M. Names to be given in on or before 1st July.

SCHOLARSHIPS.¹

1. *Steven Scholarship in Agriculture* (No. XIII. p. 224).
2. *A Hope Prize Scholarship in Chemistry* (No. II. p. 452).
3. *Neil Arnott Scholarship for Experimental Physics* (No. XXIV. p. 217).

Competitors for the above Scholarships must have studied the subjects of Examination at the University of Edinburgh. No Fellowship, Scholarship, or Bursary can be held along with any other Fellowship, Scholarship, or Bursary.

BURSARIES.²

1. *One Sibbald Bursary*, value £30 a year, tenable for three years.
- 2-6. *Four Heriot Bursaries*, each of the annual value of £30, and tenable for three years.
7. *Renton Bursary*, of about £18, 8s. 6d.

PRIZES.³

1. *Gunning Victoria Jubilee Prize in Chemistry.*
- 2, 3. *Two Newton Bursaries or Prizes*, of about £21 each, tenable for two years.
4. *The Ellis Prize in Physiology.*
5. *The Dobbie-Smith Gold Medal in Botany.*
6. *The Lord Rector's Prize*, of twenty-five guineas.
- 7-10. *Three Gray Prizes.*

WILLIAM DICKSON TRAVELLING FUND.

The William Dickson Travelling Fund (see p. 227).

N.B.—*Scholars, Bursars, or Fellows must apply to the Convener of the Science Degrees Committee, for Certificates to entitle them to draw instalments of Science Scholarships, and to the Factor for payment thereof, within three months after they have become payable, otherwise they will be regarded as having resigned. Any who desire to resign must at once announce this to the Convener and to the Factor.*

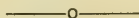
JAMES GEIKIE, LL.D.,
Convener of the Science Degrees Committee.

¹ For further particulars, see "Scholarships" in Faculties of Arts and Medicine.

² For further particulars, see "Bursaries" in Faculty of Arts.

³ For further particulars, see "Prizes" in Faculties of Arts and Medicine.

Deeds of New Foundations, etc.



EDINBURGH UNIVERSITY ENDOWMENT ASSOCIATION BURSARIES.—ADDITIONAL RULE.

“WHEN no award of any Bursary or lapsed Bursary can be made under these Rules, it shall be in the discretion of the Senatus to award the said Bursary for one year only to a student in the first or any other year whose merit has been attested in the usual Bursary Examination of his year.”

EXCERPT FROM THE TRUST DISPOSITION AND SETTLEMENT OF MRS
ELIZABETH TREVELYAN, OF TYNEHOLM, dated 7th February 1891.

I, MRS ELIZABETH MACKIE or TREVELYAN, of Tyneholm, in the Parish of Pencaitland, and County of Haddington, do hereby dispo-
ne, assign, and convey, free of legacy duty, “To the University of Edinburgh, the sum of One Thousand Pounds to be invested in such securities as the Court of that University may deem advisable, the interest to be applied annually for a Scholarship or Prize to be open to and tenable for a period not exceeding three years by a graduate or student of the said University, for proficiency in Engineering and Mechanical and Useful Arts, the said Scholarship to be called ‘The Arthur Trevelyan Scholarship,’ and to be held under such conditions as the Senatus of the said University may prescribe.”

THE LORIMER TRAVELLING SCHOLARSHIP IN THE UNIVERSITY OF EDINBURGH.

WE, a quorum of the Acting Committee of the Association for the better Endowment of the University of Edinburgh, present at a duly constituted meeting specially called for the purpose of finally approving and executing the following Deed:—Considering that by letter, dated the twenty-seventh day of January, Eighteen hundred and ninety-one, James Avon Clyde, Advocate, as Honorary Secretary of a Committee for raising a Fund to commemorate the services to the University of Edinburgh and to Legal Science of James Lorimer, Advocate, Professor of Public Law in the said University, made offer, on behalf of the said Lorimer Memorial Committee, to hand over to the Association

the Funds collected by them, amounting to Six Hundred Pounds or thereby, for the purpose of founding a Scholarship in the Law Faculty of the University of Edinburgh, to enable the scholar to pursue abroad the study of one or more of the subjects taught in connection with the said Professor James Lorimer's Chair of Public Law or the Law of Nature and Nations, to be called "The Lorimer Scholarship," all regulations as to eligibility and tenure to be settled by the Association and the said Lorimer Memorial Committee, subject to the approval of the Senatus and the sanction of the University Court of the said University: the said offer being made on condition that a sum sufficient, with that offered by the Lorimer Memorial Committee, for the foundation of a Scholarship of the nature above described, should be contributed to the Funds of the Scholarship by the Association; And further considering that proposed regulations for the said Scholarship were prepared by the said Lorimer Memorial Committee and the said Acting Committee of the Association; And further considering that one of the said proposed conditions was that the Scholarship should be called "The Lorimer Travelling Scholarship;" And further considering that the said proposed conditions for the said Scholarship were submitted to the Association by their General Committee in their Annual Report of date twenty-fifth January, Eighteen hundred and ninety-two; and that the Association, at their Annual General Meeting on the fifth day of February in the said year, adopted the following resolution:— "That the conditions for the 'Lorimer Travelling Scholarship,' recommended in the Annual Report of the General Committee, be approved: that the Acting Committee be instructed, on receipt of the subscribed 'Lorimer Scholarship Fund,' to ascertain, in accordance with Section 14A of the Constitution of the Association, if the University Court of the University (which body is by 'The Universities (Scotland) Act,' 1889, now in the place of the Senatus Academicus in the ownership and management of the property and revenues of the University) are willing to accept the Foundation on the said conditions: and that the Acting Committee be authorised, if the Court is ready to accept the Foundation, to appropriate the subscribed Fund, and all accumulated interest thereon, and Six Hundred Pounds of the Funds of the Association applicable to permanent foundations, to the foundation and endowment of 'The Lorimer Travelling Scholarship,' by preparing and adjusting a Deed of Foundation and Endowment thereof, containing the said conditions, and such other conditions consistent therewith, as they may think advisable; and by delivering to the University Court therewith the said Funds, or any security in which any part of them may be invested, for the Foundation and Endowment of the said 'Lorimer Travelling Scholarship,' the said Deed of Endowment to be signed by the Members of the Acting Committee present at a duly constituted meeting, summoned for the purpose of finally approving and signing the Deed:" And further considering that on the eighteenth day of February in the said year, the said James Avon Clyde paid to the Association the

sum of Six hundred and thirty-seven pounds sixteen shillings and eleven pence, as the available amount at that date of the said Subscribed Fund ; And further considering that the proposed conditions for the Scholarship have, in terms of the offer of the Committee of Subscribers, and of Rule 14 of the Constitution of the Association, been communicated to the University Court and to the Senatus Academicus of the University of Edinburgh, and that offer of the said Scholarship on the said conditions has been made to the said University Court, and that the said condition have been approved and sanctioned by them respectively, and that the University Court, by letter dated the twentieth day of April Eighteen hundred and ninety-two, under the hand of their Secretary, intimated that they were prepared to accept the said Scholarship on the said conditions ; Therefore we do hereby give and mortify the sum of Twelve hundred and pounds shillings and pence,—consisting of (1) the subscribed Fund, amounting, as above stated, to Six hundred and thirty-seven pounds sixteen shillings and eleven pence ; (2) bank interest on the said subscribed Fund ; and (3) the said sum of Six Hundred Pounds of the Funds of the Association applicable to permanent Foundations contributed by the Association to the said University Court of the University of Edinburgh, for behoof of the said University for the foundation and endowment of a Scholarship in the Faculty of Law therein under the following conditions, namely:—*First*, The Scholarship shall be called the “Lorimer Travelling Scholarship,” in memory of the services of Professor James Lorimer to the Science of Law ; to the University of Edinburgh ; and to its Law Faculty. *Second*, The said Scholarship shall be held for the encouragement of the study of the “Law of Nature and Nations” in foreign law schools by Students and Graduates in the Faculty of Law of the University. *Third*, The funds of the said Scholarship shall be invested in name of the University Court of the said University in trust for the University, and shall be applied to the purposes hereinafter mentioned, unless altered by the University Court as provided in Condition eighteenth hereof. *Fourth*, The Senatus Academicus shall be the Patrons of the Scholarship. *Fifth*, Each Scholar appointed as hereinafter provided shall hold the Scholarship for two years. *Sixth*, Each Scholar shall be entitled to the accumulations of the free annual income of the Fund for the two years immediately preceding his appointment. *Seventh*, The annual income of the Fund shall, after payment of expenses, be accumulated for two complete years from the date of foundation before the first appointment of a Scholar is made, and thereafter a new Scholar shall be appointed at the close of every second year, the income of the Fund being always allowed to accumulate during each period of two years. *Eighth*, All persons shall be eligible as candidates for the Scholarship who, during the two years immediately preceding that in which a new Scholar falls to be appointed, have completed the examinations for any degree in Law in the University of Edinburgh in the following subjects, namely,

(1) The "Law of Nature and Nations," including therein the Philosophy of Law, (2) the Civil Law, and (3) either (a) Constitutional Law and History, or (b) Political Economy. *Ninth*, Each person desiring to become a Candidate, before being accepted as such, must obtain the approval of the Law Faculty of the University to his selection of the Law School or Schools furth of Great Britain and Ireland which he is to attend; and no Candidate, either before or after being elected to the Scholarship, shall alter his selection of such Law School or Schools without the sanction of the Faculty previously obtained. *Tenth*, The Candidate who shall, in the opinion of the Faculty of Law, have passed with most distinction in the examinations for graduation in Law in the subjects above set forth during the two years immediately preceding the election, and who is willing to fulfil the conditions herein provided, shall be eligible for election, and the Patrons may elect him accordingly, provided always that before so doing they shall take into special consideration the proficiency shown by the Candidate in the first of these subjects, and may also consider whether he possesses a competent knowledge of the modern language or languages spoken in the Law School or Schools he has selected. *Eleventh*, It shall be in the sole discretion of the Patrons not to elect a Scholar in the event of no suitable person being eligible or willing to fulfil the conditions of the Scholarship, in which event the Scholarship shall remain vacant until the close of the second year thereafter. *Twelfth*, During the first or second year of tenure, or both, the Scholar shall pursue his studies in the "Law of Nature and Nations," including therein the Philosophy of Law, or in any department thereof, at the Law School or Schools selected as hereinbefore provided, spending not less than one academical year in all at such Law School or Schools; and he shall be expected, though not bound, to spend as much of the remainder of the two years as is convenient in residence abroad. *Thirteenth*, Each Scholar shall, at such time or times as the Faculty of Law shall appoint, deliver a course of not less than three lectures in the University of Edinburgh, or, in his option, he shall write and submit to the Faculty of Law a thesis; such lectures or such thesis to deal with the "Law of Nature and Nations," including therein the Philosophy of Law, or any department thereof, and to bear on the work done by him as Lorimer Scholar. *Fourteenth*, The value of the Scholarship shall be paid to each Scholar in the first or second years of his tenure, or partly in one and partly in the other of the said years, and either in one sum or in instalments, as the Faculty of Law shall deem expedient, having regard to the circumstances and intentions of the Scholar. *Fifteenth*, The Faculty of Law may require the Scholar to satisfy them, by periodical reports or otherwise, that he is duly attending the Law School or Schools selected by him, and that he is pursuing his studies there in a satisfactory manner. *Sixteenth*, In case of what shall appear to the Patrons to be serious misconduct on the part of any Scholar, they shall have power to declare the Scholarship vacant, subject to an appeal to the University Court if taken within one

month, but the decision of the Patrons shall take effect from its date unless reversed on such appeal. *Seventeenth*, In case of vacancies occurring by death or otherwise, accumulations of income shall be added to capital. *Eighteenth*, The regulations contained in the foregoing conditions, with the exception of those contained in conditions *First*, *Second*, *Third*, and *Fourth*, may be altered at any time by the University Court on receiving a report from the Faculty of Law, through the Senatus Academicus, that such alteration is expedient in order to carry out more effectually the intentions of the Founders as described in conditions *First* and *Second*;—and we consent to Registration hereof for preservation.—In witness whereof, &c.—Dated 1892.

Benefactors of the University.

THE Revenues of the University were formerly scanty and very inadequate for the encouragement of the higher education and learning in the Scottish metropolis. Scholarships and Fellowships were unknown prior to those recently instituted, and the emoluments of several of the Chairs are still greatly inferior to those in many other Universities.

During the early period of its history, the University received a considerable number of small donations and bequests, chiefly for Bursaries. Notices of these will be found in the preceding pages, in the Histories of the University by Bower, Dalzel, and Grant, and in the Report of the Universities' Commissioners in 1830. A list of early Benefactors to the Library is given at p. 49.

By Act 1 & 2 Vict., cap. 55, the various sums of money mortified in the hands of the Town Council for the support of the University, amounting to £13,119, were discharged, and an annual payment of £2500 (since reduced to £2170), secured upon the revenues of Leith Docks, is assigned to the University for the purposes of these bequests.

Within the present century, but especially since the year 1860, many donations and bequests have been made for Fellowships, Scholarships, and Bursaries, for the endowment of Chairs, and for the New Buildings, which will shortly be completed by the erection of the noble "M'Ewan Hall." As the University, however, is still in many respects very inadequately endowed, much still requires to be done in order that it may not fall behind the requirements of the age. It is therefore hoped that the generosity of future donors will remedy this defect, and be directed towards the improvement of the Library, the augmentation of the General Fund, and various other academical purposes. Intending Benefactors are respectfully

reminded that additional Chairs, Lectureships, Supplementary Endowments for existing Chairs and Lectureships, Scholarships for many branches of scientific research, and contributions to the University Fund for general purposes, besides ordinary Bursaries and Prizes, are still urgently required. The wishes of Donors and Testators are in every case scrupulously observed, and their names, if so desired, may always be connected with any Benefaction they may bestow. Such Benefactions may simply be conveyed to the "University of Edinburgh," and full powers of ordinary administration should be conferred upon the University authorities. All necessary information will be gladly afforded by the Office-bearers of the University. The following list includes the chief Benefactors of the present century, together with the purposes of their benefactions.¹ :—

(A.)—*Founders of Bursaries in the present Century.*

Rev. J. STEWART, South Carolina—Founder of the Stewart Bursaries.
Sir JOHN M'PHERSON, late Governor-General of India—Founder of the M'Pherson Bursary.

Rev. R. BLAIR, D.D.—Founder of the Blair Bursaries in Arts and Theology,
J. STEWART HEPBURN, Esq. of Colquhalzie—Founder of three Theological Bursaries.

JOHN JAMIESON, Esq., Edinburgh—Founder of the Jamieson Bursary.
GEORGE PARKER BIDDER, Esq.—Founder of the Jardine Bursary.

WILLIAM LENNIE, Esq., Teacher, Edinburgh—Founder of the Lennie Bursaries.

JOHN BRUCE, Esq., Trinity Crescent, Edinburgh—Founder of the Bruce Bursaries.

M'DIARMID TESTIMONIAL TRUSTEES—Founders of the M'Diarmid Bursary.

W. PATRICK, Esq. of Roughwood—Founder of the Patrick Bursaries.

JAMES GRAY, Esq. of Baadpark—Founder of the Gray Bursaries.

¹ An Association exists for the purpose of promoting—1st, The Foundation of Scholarships and Fellowships for the encouragement of the higher learning among the more advanced Students; 2d, The better Endowment of existing Chairs; 3d, The Foundation of new Professorships; and 4th, Other University objects.

The Chancellor of the University is President of this Association; the Hon. Secretary is Sir Alexander Christison, Bart.; and the Acting Secretary is John Christison, Esq., W.S., 40 Moray Place, Edinburgh.

- EDINBURGH CAITHNESS ASSOCIATION—Founders of a Bursary.
EDINBURGH GALLOWAY ASSOCIATION—Founders of a Bursary.
AYRSHIRE CLUB—Founders of two Bursaries.
PEEBLES-SHIRE SOCIETY—Founders of a Bursary.
Dr ABERCROMBIE, Cape Town—Founder of a Bursary.
Mrs MARGT. TYNDALL BRUCE of Falkland—Founder of three Bursaries.
TRUSTEES of FRANCIS J. SCOTT, Esq. of Mount Lodge, Portobello—
Founders of two Bursaries.
Miss HANNAH HARRISON of Lasswade—Founder of a Bursary.
Miss MARY ETTLES of Inverness—Founder of three Bursaries, and the
“Ettles Medical Scholarship.”
TRUSTEES of the Rev. JOHN SPENCE, Minister of Kinnaird—Founders
of two Bursaries.
JOHN ROBERTSON SIBBALD, M.D.—Founder of Five Bursaries.
ARGYLLSHIRE, BUTE, and WESTERN ISLES ASSOCIATIONS—Founders
of a Bursary.
SUBSCRIBERS to MEMORIAL to ROBERT STEWART, Esq. of Ardvor-
lich—Founders of a Bursary.
THE EDINBURGH BORDER COUNTIES ASSOCIATION—Founders of two
Bursaries.
THE RIGHT HON. THOMAS, EARL OF ZETLAND—Founder of the
Orkney and Zetland Bursary.
TRUSTEES OF JAMES GRIERSON, OF OGSCASTLE—Founders of the
Grierson Bursaries.
TRUSTEES OF DR MACKIE, Leith—Founders of Mackie Bursaries.
TRUSTEES of J. CAIRNS, Esq., W.S.—Founder of the Cairns Bursary.
TRUSTEES OF MRS JOHNSTONE of Harthope, Moffat—Founders of the
Johnstone of Harthope Bursary,
TRUSTEES OF JAMES LAMBERT, Esq., Alloa—Founder of the Lambert
Bursary.
ROBERT MARSHALL, Esq., Merchant, Edinburgh—Founder of the
Marshall Bursary.
JOHN FOTHRINGHAM, Esq. of Heathpool—Founder of the Fothering-
ham and Forrest Bursaries.
Right Hon. LAWRENCE, EARL OF ZETLAND—Founder of the Zetland
Bursaries.
ANDREW THOMSON, M.D.—Founder of Eight Bursaries in Arts, Divi-
nity, Law, and Medicine.

- EDINBURGH EAST LOTHIAN ASSOCIATION—Founders of a Bursary in Arts.
- EDINBURGH UNIVERSITY ENDOWMENT ASSOCIATION—Founders of Six Bursaries in Arts.
- Mrs ISABELLA WEBSTER—Founder of the Webster Bursaries in Divinity.
- Dr JOHN AITKEN CARLYLE—Founder of two Bursaries in the Faculty of Medicine.
- Mrs ELIZABETH MACKENZIE—Founder of the Mackenzie Bursaries.
- Dr JOHN MUIR—Founder of a Classical Bursary.
- TRUSTEES OF MRS BARBARA MACAULAY OR MYLNE—Founders of a Bursary in Divinity.
- TRUSTEES OF REV. JOHN PATTERSON—Founders of a Bursary in Anglo-Saxon Grammar and Literature.
- THOMAS CARLYLE—Founder of the John Welsh Bursaries in Mathematics and Classics.
- Mrs HELEN ANDERSON or RONALD, Liverpool—Founder of the Anderson Bursaries.
- SUBSCRIBERS to Testimonial to W. MACKINNON, Esq. of Balinakill—Founders of the Mackinnon Bursaries.
- TRUSTEES of JAMES WHITELAW—Founders of Whitelaw Bursaries.
- TRUSTEES of WILLIAM RENTON, Esq.—Founders of a Bursary in Divinity, and one in Arts.
- Miss ISABELLA MACDOUGALL, Perth—Founder of the John and Isabella Macdougall Bursaries.
- ROBERT HUNTER, Esq., Dalhousie Chesters—Founder of two Bursaries in Divinity.
- ROBERT PILLANS NEWTON of Castlandhill and Drumcross—Founder of the Newton Bursaries.
- PETER CAMPBELL MANN of Seaham Harbour, Durham—Founder of a Bursary.
- CHARLES JARDINE of Thorlieshope—Founder of Bursaries in Arts.
- ISAAC ANDERSON HENRY—Founder of the Anderson Henry Prize.
- Mrs H. E. MORISON—Founder of the Mackenzie (Stornoway) Bursary.
- DANIEL MACLAURIN, Esq.—Founder of the Macclaurin Bursary.
- THOMAS LOCKERBY, Esq.—Founder of the Lockerby Bursary.
- GEORGE COUSIN, Esq.—Founder of the "Bailie Cousin Bursary."
- THOMAS HILL PATTISON, M.D.—Founder of a Bursary.
- Major ROBERT ORR CRICHTON—Founder of the Crichton Bursaries in the Faculty of Medicine.
- Rev. THOMAS MAULE—Founder of Maule's Bursaries.

Mrs A. B. R. MILNER FOTHERGILL of Hayton Quarry—Founder of the Milner Fothergill Gold Medal in Therapeutics.

DONALD FRASER, M.D., London, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of the Donald Fraser Bursary in Experimental Physics.

SUBSCRIBERS TO MEMORIAL TO PROFESSOR KELLAND—Founders of Kelland Memorial Prize.

(B.)—*Founders of Scholarships or Fellowships in the present Century.*

THE PITT CLUB—Founders of two Scholarships, one in Arts and one in Divinity.

JAMES MACKENZIE, Esq., W.S.—Founder of Mackenzie Scholarship.

ALEX. HENRY RHIND, Esq. of Sibster—Founder of the Rhind Scholarships and Bursaries.

Sir DAVID BAXTER, Bart., of Kilmaron—Founder of the Baxter Scholarships in Arts and Sciences.

Sir WILLIAM FETTES, Bart.—Founder of the Fettes Exhibitions.

JOHN MAXTON, Esq.—Founder of a Divinity Scholarship.

Miss ELIZABETH DRUMMOND—Founder of the Drummond Scholarship.

Mrs MARGARET TYNDALL BRUCE—Founder of three Scholarships.

JAMES GUTHRIE, Esq., of London—Founder of the Guthrie Fellowship.

SUBSCRIBERS to HAMILTON MEMORIAL FUND, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of a Philosophical Fellowship.

ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of a Classical Fellowship.

TRUSTEES of Dr J. H. GILCHRIST—Founders of three Scholarships for Natives of India.

JOHN ROBERTSON SIBBALD, M.D.—Founder of a Medical Scholarship.

Miss MARY BAXTER, of Balgavies—Founder of a Scholarship.

SUBSCRIBERS to FALCONER MEMORIAL FUND—Founders of a Fellowship.

SUBSCRIBERS to SYME FELLOWSHIP—Founders of a Fellowship in the Medical Faculty.

SUBSCRIBERS to GOODSIR MEMORIAL—Founders of a Prize and eventually a Fellowship in the Medical Faculty.

TRUSTEES OF Mrs CHARLES MACLAREN—Founders of the Charles Maclaren Scholarship.

SUBSCRIBERS to GLOVER MEMORIAL FUND, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of the "Glover Divinity Scholarship."

MRS M. ARNOTT, Widow of NEIL ARNOTT, M.D.—Founder of the “Neil Arnott Scholarship for Experimental Physics.”

JOHN EDWARD BAXTER, Esq. of Craigtay, bequeathed the residue of his estate, out of which three Scholarships named after him have been founded by the University Endowment Association.

The Rev. DAVID AITKEN, D.D., formerly Minister of Minto—Founder of the Aitken Scholarship.

DAVID SKIRVING, Esq., of 13 Westbourne Park, London—Founder of the Skirving Scholarship for Moral Philosophy.

ANDREW THOMSON, M.D.—Founder of a Scholarship.

Misses KIDD of Woodhouse—Founders of the David Kidd Divinity Scholarship.

Dr R. H. GUNNING of Rio Janeiro—Founder of two Scholarships and a Fellowship in the Faculty of Divinity, and of eleven Prizes in the Faculty of Medicine.

DR T. LECKIE—Founder of the Leckie-Mactier Scholarship.

SUBSCRIBERS TO MEMORIAL OF DR COLDSTREAM—Founders of the Coldstream Memorial Medical Missionary Scholarship.

Mrs JAMES BUCHANAN—Founder of a Scholarship in Midwifery and Gynecology.

Dr ANDREW VANS DUNLOP, H.E.I.C.—Founder of the Vans Dunlop Scholarships in Arts, Law, and Medicine.

Misses STEVEN of Bellahouston—Founders of a Scholarship in Agriculture.

SUBSCRIBERS TO MEMORIAL OF DR CHARLES MURCHISON—Founders of the “Charles Murchison Scholarship.”

Mrs MARY ANN SCOTT or THOMSON of Hawick—Founder of the James Scott Scholarship in Midwifery.

ROBERT MACKAY-SMITH, Esq., Edinburgh—Founder of the Mackay-Smith Scholarships in Natural Philosophy and Chemistry.

Dr FREDERICK JOHN MOUAT—Founder of the Mouat Scholarship in Practice of Physic.

Dr JOHN STARK, Auchtermuchty—Founder of the Stark Scholarship in Clinical Medicine.

Mrs KIDD—Founder of “James Fairbairn’s Scholarship.”

Miss JANE JEFFREY—Founder of the Jeffrey Scholarships.

Dr A. H. FREELAND BARBOUR—Founder of the Freeland Barbour Fellowship.

Miss MATILDA JOHNSTON COBB—Founder of the Cobb Divinity Scholarship.

Mrs ELIZABETH MACKIE or TREVELYAN—Founder of Scholarship in Engineering and Mechanical and Useful Arts.

Mrs MUIRHEAD—Founder of Prizes in Civil Law Class.

(C.)—*Founders of New Chairs, Contributors of Endowments to existing Chairs, or of Money, &c., to the University Funds, Library, &c., within the present Century.*

General JOHN REID—Founder of the Theory of Music Chair, who also bequeathed money to the Funds of the University.

General Sir JOSEPH STRATON—Bequest to the University Funds.

Sir JAMES ERSKINE, of Torry, bequeathed Pictures, Bronzes, and Marbles to the University. [Lent to the National Gallery.]

Sir WILLIAM PULTENEY—Founder of the Chair of Agriculture.

Dr WILLIAM THOMSON—Founder of the Thomsonian Lectureship in Mineralogy.

Dr THOMAS CHARLES HOPE, late Professor of Chemistry—Founder of the Hope Prize.

Sir GEORGE BALLINGALL, late Professor of Military Surgery—Presented his Library to the University.

Dr W. P. ALISON, late Professor of the Theory of Medicine—Presented his Medical Books to the University.

JOHN MUIR, D.C.L., LL.D., Edinburgh—Founder of Sanskrit Chair.

Mrs MARGARET TYNDALL BRUCE—Founder of Prize in Logic Class.

DANIEL ELLIS, Esq.—Founder of "The Ellis Prize" in the Faculty of Medicine.

JOHN EDWARD BAXTER, Esq., of Craigtay, bequeathed the reversion of his Estate for the purpose of founding Scholarships, etc.

Sir DAVID BAXTER, Bart., of Kilmaron—Founder of the Chair of Engineering.

DAVID COWAN, Esq., of Auchendrane, bequeathed £1000 to the Association for Promoting the Endowment of the University.

Dr NEIL ARNOTT gave £1000 for Promoting the Study of Experimental Physics among the Medical Students of the University.

Sir RODERICK IMPEY MURCHISON gave £6000 for the Endowment of the Chair of Geology.

J. O. HALLIWELL PHILLIPPS, Esq., presented his valuable Shakespearean Collection to the University.

ROBERT COX, Esq., W.S., bequeathed £5000 for general purposes and for completing the Dome of the University buildings.

Signor THEOPHILE BUCHER bequeathed his Music Library to the Chair of Music, and reversion of estate to found Scholarships in Music.

THE MERCHANT COMPANY OF EDINBURGH, and other Governors of George Watson's and Daniel Stewart's Hospitals—Founders of the Chair of Political Economy and Commercial Law.

Mr HENRY G. and Miss FRANCES WATSON—Donors of Fund for the "Watson-Gordon Professorship of Fine Art." The Deed of Foundation will be found in CALENDAR for 1873-74, p. 320.

Sir D. BAXTER, of Kilmaron, bequeathed £20,000 for the Extension of the University buildings, and £20,000 for the Further Endowment of the Chairs in the Faculty of Arts.

Miss BROWN, of Lanfine, presented a portion of the Minerals and Fossils which belonged to her father—to be called "The Waterhaugh Collection."

Rev. HEW SCOTT of Wester Anstruther—Founder of the Scott and Dunbar Prize in Greek.

JOHN WILSON, Esq. of South Bantaskine—Founder of the Robert Wilson Prize in Chemistry.

Mrs E. WIGHTMAN—Founder of the Wightman Prize in Clinical Medicine.

THE BELL TRUSTEES, who gave £6000 for the Endowment of the Bell Chair of the Theory, History, and Practice of Education. (Endowment increased in 1886 by £4500, added by Educational Endowments Commission.)

JOHN B. BAILLIE, who transferred the collection of Arabic MSS., formed by Lieut.-Col. Baillie of Leys, to the University Library.

JAMES GEORGE BEANEY, Esq.—Founder of the Beaney Prize.

ANDREW ROBERTSON CAMERON, M.D., of Richmond, New South Wales—Founder of the Cameron Prize.

Dr DAVID LAING, bequeathed his MSS. to the University Library.

Mrs HODGSON, presented Works on Political Economy, collected by her late husband, Prof. Hodgson, to the University Library.

Dr VANS DUNLOP bequeathed £3000 to the General Fund of the University.

SUBSCRIBERS to the CELTIC CHAIR, by whom a fund of £14,000 was raised for the endowment of this Chair by the exertions of Professor Blackie.

Miss MARY DICK bequeathed a moiety of the residue of her estate to accumulate for twenty-one years from 1883, or till it shall amount to £10,000, for the Foundation of a Chair of Comparative or Surgical Anatomy, as considered most to be required.

SUBSCRIBERS of £500 and upwards to the "UNIVERSITY OF EDINBURGH BUILDINGS EXTENSION SCHEME":—¹

The late Sir David Baxter of Kilmaron, Bart., by bequest, less Legacy Duty,	-	-	-	£18,000	0	0
William M'Ewan, Esq., M.P.,	-	-	-	6,500	0	0
The late Duke of Buccleuch and Queensberry, K.G., D.C.L., LL.D.,	-	-	-	4,000	0	0
The Magistrates and Council of the City of Edinburgh,	-	-	-	3,100	0	0
The Right Hon. the Earl of Moray,	-	-	-	2,525	0	0
The Right Hon. The Earl of Rosebery, LL.D.,	-	-	-	2,400	0	0
The Royal College of Physicians of Edinburgh,	-	-	-	1,575	0	0
The Right Hon. the Earl of Stair, K.T.,	-	-	-	1,500	0	0
Messrs John Jeffrey & Co.,	-	-	-	1,500	0	0
The late J. Fulton, Esq., Clinton Road,	-	-	-	1,150	0	0
Charles Andrew Aitchison, Esq., Queen Street,	-	-	-	1,050	0	0
The Most Hon. the Marquis of Bute,	-	-	-	1,000	0	0
Andrew Carnegie, Esq., New York and Pittsburg,	-	-	-	1,000	0	0
The Right Hon. the Earl of Derby,	-	-	-	1,000	0	0
J. R. Findlay, Esq., Rothesay Terrace,	-	-	-	1,000	0	0
The Right Hon. The Earl of Home,	-	-	-	1,000	0	0
The Right Hon. The Earl of Hopetoun,	-	-	-	1,000	0	0
The late Sir William Stirling-Maxwell of Pollok and Keir, Bart., LL.D., M.P.,	-	-	-	1,000	0	0
The Right Hon. The Earl of Wemyss and March, LL.D.,	-	-	-	1,000	0	0
The Right Hon. the Lord Justice-General, D.C.L., LL.D., Chancellor of the University,	-	-	-	800	0	0
Messrs Thomas Nelson & Sons,	-	-	-	800	0	0
The late Henry George Watson, Esq., C.A.,	-	-	-	800	0	0
The Most Hon. the Marquis of Lothian,	-	-	-	750	0	0
The Society of Writers to the Signet,	-	-	-	750	0	0
J. Lindsay Bennet, Esq., Taviton Street, London,	-	-	-	710	0	0
James Cowan, Esq., Royal Terrace,	-	-	-	700	0	0
Robert Richardson, Esq., Bruntsfield Place,	-	-	-	700	0	0
C. Morrison, Esq. of Islay,	-	-	-	700	0	0
C. Jenner, Esq.,	-	-	-	650	0	0
The late David Anderson, Esq., of Moredun,	-	-	-	600	0	0

¹ See Statement of Funds in Calendar, 1889-90, Appendix, p. 22.

James H. Renton, Esq., Park Lane, London,	-	£600	0	0
Professor Sir W. Turner, LL.D.,	-	600	0	0
The Most Hon. The Marquis of Hartington,	-	500	0	0
Charles Cowan, Esq., of Logan House,	-	500	0	0
T. R. Buchanan, Esq., M.P.,	-	500	0	0
P. D. Swan, Esq., Provost of Kirkcaldy,	-	500	0	0
Lady Campbell of Garscube,	-	500	0	0
The late William Cumming, Esq., M.D., Ainslie Place,	-	500	0	0
The late James T. Gibson-Craig, Esq., York Place,	-	500	0	0
Professor Crum Brown,	-	500	0	0
The Goldsmiths' Company of London,	-	500	0	0
W. Mackinnon, Esq., of Balinakill and Loup,	-	500	0	0
The late Graham Menzies, Esq. of Hallyburton,	-	500	0	0
John Graham Menzies, Esq., Grosvenor Crescent,	-	500	0	0
W. D. Menzies, Esq., Grosvenor Crescent,	-	500	0	0
The late Miss Trail, Aberlady, by bequest,	-	500	0	0
Messrs William Younger & Co., Abbey Brewery,	-	500	0	0
The Right Hon. The Earl of Zetland,	-	500	0	0
Anonymous,	-	500	0	0

The total amount of subscriptions received was £149,048, 2s. 5d.

EARL OF ROSEBERY provided £50 a year for Lectureship on Philosophy of Natural History for five years.

WILLIAM F. CUMMING, M.D., presented a Drinking Fountain, erected in the Quadrangle of the Old Buildings, in 1886.

JOHN HOPE, W.S., presented a Drinking Fountain to the University New Buildings, 1886.

ALEX. GIBSON, Esq., Advocate, bequeathed £2000, free of legacy-duty, to the General Fund of the University.

WILLIAM M'EWAN, Esq., M.P., founder of the M'Ewan University Hall. *See end of Appendix.*

ADAM GIFFORD, Senator of the College of Justice, bequeathed £25,000 for the foundation of a Lectureship for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term.

JOHN FULTON, Esq., bequeathed £3000 to General University Fund, the greater part of which has been devoted to the equipment of the new Engineering Laboratory, called the "Fulton Laboratory."

Miss ELIZABETH STEVEN, of Bellahouston—Founder of the Steven Lectureship in connection with the Chair of Agriculture.

BEQUESTS AND DONATIONS DURING 1891-92.

I. Bequests.

£500 (free of Legacy Duty) by Mrs Muirhead, widow of the late Professor Muirhead, for Prizes in Civil Law Class.

£1000 by Mrs Elizabeth Mackie or Trevelyan, of Tyneholm, Haddingtonshire, to found a Scholarship in Engineering and Mechanical and Useful Arts.

II. Donations.

Portrait of the late James Lorimer, Professor of Public Law (1862-90). Painted and presented by John H. Lorimer, A.R.S.A.

Donations to Library.

Besides various valuable contributions from the Governments of Great Britain, the Argentine Republic, Bengal, Canada, France, India, Italy, New South Wales, New Zealand, Norway and Sweden, Russia, Victoria, &c., the University Library has in the course of the year 1891-92 received Donations from the following Universities:—Aberdeen, Aix-la-Chapelle, Andover, Basle, Birmingham, Bologna, Bombay, Budapest, Buenos Aires, California, Christiania, Cornell, Dundee, Glasgow, Groningen, Greifswald, Harvard, Heidelberg, Johns Hopkins, Kiel, Königsberg, Lahore, Leyden, Madras, Madrid, Manitoba, New York, Rome, Rostock, Toronto, Turin, Utrecht, Venezuela, Warsaw, Yale, Zaragoza. Many other public institutions at home and abroad have also sent their publications:—The Royal Society of Edinburgh; the Royal Scottish Geographical Society, Edinburgh; the Society of Scottish Antiquaries; the Royal Observatory, Edinburgh; the Physical Society, Edinburgh; the Public Library, Edinburgh; the Church of Scotland Offices, Edinburgh; the Fishery Board for Scotland; the Glasgow Archæological Society; the Royal Irish Academy; the British Museum; the Science and Art Department, South Kensington; the Astronomical Society, London; the Greenwich Observatory; the Musical Association, London; the Birmingham Philosophical Society; the Musée Guimet; the Smithsonian Institution; the United States National Museum; the Museum of Comparative Zoology, Harvard; the Royal Society, Victoria; the Australian Museum, Sydney; the New Zealand Institute; the Canadian Institute; the Geological Survey of the United States; the Geological Survey of Minnesota; the Geological Survey of India; the Geological Survey of Canada; the Archæological Survey of India; the Medical and Physical Society of Bombay, &c., &c.

Among the numerous private donors to whose liberality the Library has been indebted may be mentioned:—

Mrs Campbell—A number of Oriental Works by the late Professor John Tytler.

Mr S. H. Hodgson—Time and Space, &c.

The Prince of Monaco—Documents historiques relatifs à la principauté de Monaco, Tome III.

Professor Luigi Bodio—Bulletin de l'Institut international de Statistique, and various Statistical Works in Italian.

Mr John Martine—The New Lapsus Linguae, &c.

Sir J. D. Marwick—List of Markets and Fairs.

Mr Hippolyte Faure—Various Works relating to the Hospitals of Narbonne.

Mr T. Sinclair—The Sinclairs of England, and several other Works.

Sir Charles Nicholson—Ægyptiaca.

Bishop Wordsworth—Christian Unity, and other Works.

Professor T. R. Fraser—Strophanthus.

Professor Wallace—The Rural Economy and Agriculture of Australia and New Zealand.

Professor Butcher—Some Aspects of Greek Genius.

Professor Lawrie—Ethica ; Metaphysica.

Professor Chrystal—Theory of Probability.

Professor Copeland—Bengali New Testament.

Professor Simpson—Works by Mrs Barbour.

Messrs W. & R. Chambers—Chambers' Encyclopædia.

Mr Borthwick—South Australia.

Mr Risley—Tribes and Castes of Bengal.

M. Guy-Valvor—Rêves et rêveries.

Mr Crisp—Registers of Stapleford Tawney.

Herr Korn—Die Schlesische Zeitung.

Mr Pye—Surgical Handicraft.

Mr Shaw—Mental Diseases.

Dr Barry—Back-to-back houses ; the Small-pox Epidemic ; and other reports.

Mr Carson—The Supreme Court of the United States.

Abstract of Accounts of the University

FOR THE YEAR ENDING 30TH AUGUST 1891.

—o—

ANNUAL SALARIES (EXCLUSIVE OF CLASS FEES) ATTACHED TO THE OFFICE OF PRINCIPAL, AND TO THE PROFESSORSHIPS, ASSISTANTSHIPS, AND EXAMINERSHIPS IN THE UNIVERSITY, BY ORDINANCE OF UNIVERSITIES COMMISSIONERS AND SUBSEQUENT DEEDS OF FOUNDATION.

PRINCIPAL.

Salary (besides Official Residence), - £1000 0 0

FACULTY OF ARTS.

	SALARIES OF PROFESSORS.	SALARIES OF ASSISTANTS.	ALLOWANCES FOR CLASS EXPENSES
Humanity - - -	£239 5 0	£100 0 0	.....
Mathematics - - -	250 1 8	100 0 0	.....
Greek - - -	238 19 4	100 0 0	.....
Logic and Metaphysics -	305 14 8	.....	.....
Moral Philosophy -	305 14 8	.....	.....
Natural Philosophy -	271 4 6	100 0 0	£100 0 0
Rhetoric and English Literature - - -	269 0 2	.....	.....
History - - -	167 5 0	.....	.....
Practical Astronomy ¹ -	317 5 0	.....	.....
Agriculture - - -	367 5 0	.....	.....
Music - - -	437 5 0	200 0 0	100 0 0
Sanskrit - - -	459 15 11	.....	.....
Engineering - - -	400 0 0	.....	28 0 0
Geology - - -	404 10 2	.....	37 8 8
Political Economy - -	467 5 0	.....	50 0 0
Class Prizes in do., - - -	- - -	- - -	24 0 0
Education - - -	382 6 2	.....	.....
Fine Art - - -	441 3 4	.....	40 8 2
Celtic Chair - - -	549 19 8	.....	.....

FACULTY OF DIVINITY.

Divinity (present value)	£426 2 2	.....	.....
Hebrew - - -	300 0 0	.....	.....
Church History - -	350 0 0	.....	.....
Biblical Criticism (present value)	630 0 0	.....	.....

¹ The Professor is also Astronomer Royal.

FACULTY OF LAW.

	Salaries of Professors.	Salaries of Assistants.	Allowances for Class Expenses.
Public Law - - -	£400 0 0	.....	.....
Civil Law - - -	250 0 0	.....	.....
History - - -	(See under Faculty of Arts.)		
Scots Law - - -	100 0 0	.....	.....
Medical Jurisprudence -	(See under Faculty of Medicine.)		
Conveyancing - -	105 0 0	.....	.....
Political Economy - -	(See under Faculty of Arts.)		

FACULTY OF MEDICINE.

Botany ¹ - - -	£200 0 0	.....	.....
Institutes of Medicine -	150 0 0	.....	.....
Practice of Physic - -	100 0 0	.....	.....
Anatomy - - -	.....	£150 0 0	£50 0 0
Chemistry - - -	200 0 0	200 0 0	100 0 0
Midwifery - - -	100 0 0	.....	.....
Natural History - -	195 15 2	.....	.....
Materia Medica - -	100 0 0	25 0 0	50 0 0
Clinical Surgery - -	100 0 0	.....	.....
Medical Jurisprudence -	100 0 0	25 0 0	35 0 0
Surgery - - -	100 0 0	.....	.....
General Pathology - -	100 0 0	.....	.....

In addition to the permanent allowances for Assistants and Class Expenses entered above,—annual grants for the same purposes are made by the University Court from the General University Fund. The amount for 1890-91 was:—

For Assistants, - - -	£1,440 10 0
For Class Expenses, - - -	188 0 0

£1,628 0 0

ADDITIONAL EXAMINERS FOR DEGREES.

	Salaries.
In Arts { Classical Literature - - -	£120 0 0
{ Mental Philosophy - - -	120 0 0
{ Mathematics - - -	120 0 0
{ Schoolmaster's Diploma - - -	6 6 0
In Medicine—13 Examiners at £75 - - -	975 0 0
In Divinity—2 Examiners, each £26, 5s. - - -	52 10 0
In Law—2 Examiners, a share of Fees up to £26, 5s. each - - -	52 10 0
In Science—one Examiner in Civil Engineering - - -	6 6 0
In Agriculture—4 Examiners at £6, 6s. each - - -	25 4 0

¹ This includes £100 formerly paid to the Regius Keeper of the Botanic Garden.

SUMMARY,
INCLUDING ANNUAL GRANTS BY UNIVERSITY COURT.

	Salaries.
Principal - - - - -	£1,000 0 0
Chairs in the Four Faculties - - - - -	10,280 17 7
Assistants - - - - -	2,440 10 0
Examiners in Arts, Medicine, Divinity and Law ¹ - - - - -	1,474 13 0
Allowances for Class Expenses - - - - -	802 16 10
	<u>£15,998 17 5</u>

STATEMENT

SHOWING THE CAPITAL OF THE UNIVERSITY IN 1891,
AND INCOME AND EXPENDITURE FOR THE
YEAR 1890-91.

The University is maintained—1. By interest, &c., accruing from Capital Funds in charge of the University Court; 2. by Annual Payments made from Crown and Parliamentary Grants, and from an annuity payable by Act of Parliament out of the Revenues of the Harbour and Docks of Leith; 3. by Matriculation, Graduation, and other Fees, paid annually; and 4. by annual payments by public bodies or private persons, and from Bursary Funds, of which neither principal nor interest is in the hands of the Court. The income derived from the last of these sources is omitted from the present Statement, because the Court have not hitherto been able to obtain the necessary information for determining its amount, having no control over these funds or their application.

A.—CAPITAL IN CHARGE OF THE UNIVERSITY COURT,
INCLUDING FLOATING BALANCES.

As at 31st August 1891.

I.—DESTINED FOR SPECIAL PURPOSES BY DEED, STATUTE, OR
ORDINANCE.

I. For Salaries of Professors, viz. :—

(1.) Pulteney Foundation (Agricultural Chair) - - -	£957 19 9
(2.) Thomson Foundation (4-5ths Nat. Hist. Chair) - - -	994 18 6
(3.) Muir Foundation (Sanskrit Chair) - - -	6,250 8 9
(4.) Reid Foundation (Music Chair) - - -	12,000 0 0
(5.) Baxter Foundation (Engineering Chair) - - -	5,037 17 6
(6.) Murchison Foundation (Geology Chair) - - -	5,045 14 4
(7.) Watson-Gordon Foundation (Fine Art Chair) - - -	11,103 16 0
(8.) Bell Foundation (Education Chair) - - -	10,555 18 1
(9.) Celtic Chair, - - - - -	14,214 18 9

Carry forward £66,161 11 8

£540 of this sum is payable out of Government grant.

Statement of Capital.

	Brought forward	£66,161	11	8
(10.) Gifford Lectureship, -	-	22,732	7	3
(11.) Baxter Fund for further endowment of Chairs in the Faculty of Arts, excepting Engineer- ing and Sanskrit, -	-	17,980	14	3
(12.) Steven Lectureship in Agriculture, -	-	3,016	9	0
(13.) Chair or Lectureship on Forestry, -	-	1,000	0	0
	TOTAL	£110,891	2	2
2. For Class Expenses and Assistants :—				
(1.) Reid Found. (Music Chair),	£8,727	8	10	
(2.) Baxter Found. (Engineering Ch.)	867	15	11	
(3.) Murchison Found. (Geology Ch.)	1,015	17	2	
(4.) Thomson Foundation (1-5th Mineralogy), -	248	14	8	
(5.) Watson-Gordon Foundation -	1,110	0	0	
	TOTAL,	11,969	16	7
3. For Reid Commemoration Concert -	-	8,000	0	0
4. For Bursaries, Scholarships, Fellowships and Prizes :—				
(1.) Aitken Scholarship -	£3,025	4	9	
(2.) Ardvorlich Bursary -	412	0	0	
(3.) Neil Arnott Prize -	1,211	13	10	
(4.) Neil Arnott Scholarship -	1,159	2	2	
(5.) Baxter Mathematical and Philo- sophical Scholarship -	3,353	7	1	
(6.) Baxter Natural and Physical Science Scholarships -	4,039	0	6	
(7.) Misses Baxter of Balgavies Scholarships -	3,946	0	0	
(8.) John Edward Baxter Scholarships	7,879	1	8	
Do., For Examiners' Fees	349	17	7	
(9.) Bruce of Grangehill & Falkland's Scholarships and Bursaries	14,877	5	8	
(10.) Beaney Prize -	1,000	0	0	
(11.) Cairns Bursary -	474	10	0	
(12.) Cameron Prize -	2,697	9	10	
(13.) Dr John Aitken Carlyle's Medical Bursaries -	1,679	18	6	
(14.) Cousin Prize -	463	12	7	
(15.) Bailie Cousin Bursary, -	706	7	10	
(16.) Cobb Scholarship -	993	12	8	
(17.) Crichton Bursaries, -	26,005	0	0	
(18.) Drummond Scholarship -	2,721	7	4	
Do., For Examiners' Fees	289	16	5	
	Carry forward	£46,104	11	7
		£130,860	18	9

	Brought forward	£46,104	11	7	£130,860	18	9
(19.)	Dickson Travelling Fund	-	3,133	5	11		
(20.)	Dundas Bursaries	-	867	16	10		
(21.)	Edinburgh University Endowment Association Arts Bursaries (revenue on hand) ¹	-	140	0	0		
(22.)	Ettles Divinity Scholarships	-	3,235	15	11		
(23.)	Ettles Medical Scholarship	-	1,000	0	0		
(24.)	Ellis Prize	-	777	8	3		
(25.)	Falconer Memorial Fellowship	-	2,835	19	9		
	Do., For Examiners' Fees	-	115	15	4		
(26.)	Fotheringham & Forrest Bursaries	-	1,225	1	9		
(27.)	James Fairbairn Scholarship	-	1,057	15	5		
(28.)	Freeland Barbour Fellowship	-	1,496	12	10		
(29.)	Donald Fraser Bursary in the Physical Sciences,	-	1,517	6	6		
(30.)	Glover Divinity Scholarship	-	1,115	19	4		
(31.)	Gray Scholarships	-	2,253	13	1		
(32.)	Guthrie Fellowship	-	2,741	8	10		
(33.)	Grierson Bursaries	-	10,529	7	1		
(34.)	Gunning Theological Scholarships ¹	-	117	3	9		
(35.)	Goodsir Memorial Prize	-	981	18	4		
(36.)	Hamilton Philosophical Fellowship	-	2,645	10	8		
	Do., For Examiners' Fees	-	144	1	11		
(37.)	Harrison Bursary	-	960	8	8		
(38.)	Hope Prize	-	2,503	3	2		
(39.)	Robert Hunter Bursaries	-	998	0	0		
(40.)	Jardine Bursary	-	915	3	1		
(41.)	Jardine of Thorlieshope Bursaries	-	4,313	16	11		
(42.)	Johnstone of Harthope Bursary	-	577	9	5		
(43.)	Jeffrey Scholarships	-	4,582	7	0		
(44.)	David Kidd Divinity Scholarship	-	1,049	15	0		
(45.)	Kelland Memorial Prize,	-	147	10	0		
(46.)	Leith Harbour Annuity Fund	-	1,227	8	3		
(47.)	Lang's Bequest	-	412	11	1		
(48.)	Leckie Mactier Fellowship	-	2,041	16	9		
(49.)	Charles Maclaren Scholarship	-	2,836	14	7		
	Do., For Examiners' Fees	-	201	6	8		
(50.)	Maxton Scholarship	-	1,085	3	0		
(51.)	Mackenzie Classical Scholarship	-	3,114	17	3		

Carry forward £139,087 3 6 £130,860 18 9

Capital not in hands of University Court.

	Brought forward	£139,987	3	6	£130,860	18	9
(52.)	Macpherson Bursaries	-	2,862	19	2		
(53.)	Mackenzie Bursaries in Anatomy	1,013	11	2			
(54.)	Marshall Bursary	-	1,011	14	4		
(55.)	MacKinnon Bursaries	-	1,636	13	10		
(56.)	Mann Bursaries	-	2,065	5	3		
(57.)	Mackie Bursaries	-	1,824	13	7		
(58.)	Maclaurin Bursary	-	2,117	6	5		
(59.)	Milner Fothergill Prize	-	318	6	6		
(60.)	Newton Bursary	-	2,368	12	0		
(61.)	Prizes in Sanskrit, <i>Capital applicable</i>	-	45	13	8		
(62.)	Pitt Club Classical Scholarship	-	1,709	7	4		
(63.)	Pitt Club Theological Scholarship	-	3,325	12	7		
(64.)	Patrick Bursaries	-	3,492	17	5		
(65.)	Rhind Scholarships	-	4,997	3	7		
(66.)	Renton Bursary in Arts	-	551	11	9		
(67.)	Renton Bursary in Divinity	-	560	0	2		
(68.)	Horsliehill Scott Bursaries	-	2,080	0	9		
(69.)	Shaw Philosophical Fellowship	-	4,364	15	2		
(70.)	Shortt Bursary	-	255	18	0		
(71.)	Steven of Ballahouston Scholarship	-	2,033	11	0		
(72.)	Syme Surgical Fellowship	-	3,012	14	3		
	Do., For Examiners' Fees	-	232	5	8		
(73.)	Scott and Dunbar Prize	-	302	7	11		
(74.)	Dobbie Smith Prize	-	162	2	2		
(75.)	Mackay Smith Scholarships	-	2,975	0	0		
	Do., For Examiners' Fees	-	116	18	1		
(76.)	Stark Scholarship	-	1,427	6	0		
(77.)	James Scott Scholarship	-	1,037	8	9		
(78.)	Tarsappie Bursary	-	159	8	7		
(79.)	Vans Dunlop Scholarships	-	66,325	1	7		
(80.)	Wightman Prize	-	386	16	6		
(81.)	Robert Wilson Memorial Prize	-	250	15	2		
(82.)	Webster Bursaries	-	4,132	18	0		
(83.)	John Welsh Bursaries	-	3,890	6	11		
(84.)	Whitelaw Bursaries	-	2,106	12	6		
(85.)	King William III. Bursaries	-	6	10	3		

TOTAL ————— 267,362 6 9

5. Principal's Official Residence - 4,694 0 0

Carry forward £402,917 5 6

	Brought forward	£402,917	5	6
6. For Completion of present College Buildings :—				
Robert Cox's Bequest, with interest	-	-	20	16 10
7. Gilchrist Fund for purchase of apparatus	-	-	2,214	16 11
8. Eskbank Feu-Duties—Casualty Fund	-	-	209	0 11

II.—CAPITAL, THE INCOME OF WHICH IS APPLICABLE FOR THE GENERAL PURPOSES OF THE UNIVERSITY.

(1.) General Reid's Trust Fund, Balance after setting aside sufficient Capital to provide Income for Special Purposes as above	£20,000	0	0
(2.) General Sir Joseph Straton's Trust Fund	-	-	14,039 15 8
(3.) Robert Cox's Bequest	-	-	1,794 14 8
(4.) Alexander Gibson's Bequest	-	-	2,000 0 0
(5.) John Fulton's Bequest	-	-	642 17 2
			38,477 7 6

III.—DISPOSABLE CAPITAL BELONGING TO GENERAL UNIVERSITY FUND, AS AT 31ST AUGUST 1891.

1. Heritable Securities, &c.	-	-	£25,905	13	10
2. Balances in Bank, &c.	-	-	1,591	19	2
Total Disposable Capital					
				27,497	13 0
Total Capital in charge of University Court,					
				£471,337	0 8

B.—INCOME OF THE UNIVERSITY DESTINED BY DEED, STATUTE, OR ORDINANCE, 1890-91.

1. For Salaries of Principal and Professors :—					
(1.) From Interest, &c., of Funds in Charge of the University Court. See Statement of Capital, A. I. 1.	-	-	-	£3,959	1 5
(2.) From Leith Harbour Annuity	-	-	-	1,038	18 1
(3.) From Parliamentary Grant	-	-	-	5,108	13 7
(4.) From Deanery of the Chapel Royal	-	-	-	900	0 0
(5.) From Land Revenues of the Crown	-	-	-	250	0 0
(6.) Foundation for Conveyancing Chair, paid yearly by Society of Clerks to H.M. Signet				105	0 0
(7.) From Funds of George Watson's and Daniel Stewart's Hospitals	-	-	-	450	0 0
2. For Class Assistants and Class Expenses :—					
(1.) From Reid Fund for Music Chair.					
See Statement of Capital. A. I. 2.				£300	0 0

Carry forward £300 0 0 £11,811 13 1

	Brought forward	£300	0	0	£11,811	13	1
(2.)	From the Gen. Univ. Fund, for the Chairs of Chemistry, Nat. Philosophy, Anatomy, Materia Medica, and Medical Jurispr.	735	0	0			
(3.)	From Foundation for Chair of Engineering - - -	29	9	11			
(4.)	From Murchison Foundation for Chair of Geology - -	36	9	9			
(5.)	From Thomson Fund (Mineralogy), for Do. - -	8	14	6			
(6.)	From Parliamentary Grant for Class Assistants in Faculty of Arts	387	10	0			
(7.)	From Funds of Geo. Watson's and Daniel Stewart's Hospitals for Chair of Commercial Economy	50	0	0			
(8.)	From Watson-Gordon Fund for Chair of Fine Art - -	41	4	0			
					1,588	8	2
3.	For Non-Professorial Examiners in Arts and Medicine, From Parliamentary Grant - -	-	-	-	523	2	6
4.	For Scholarships, Bursaries, and Prizes :—						
	(1.) From Capital Funds in Charge of University Court. See Statement of Capital, A. I. 4	£8,732	17	3			
	(2.) From Leith Harbour Annuity -	414	2	4			
	(3.) From Funds of Geo. Watson's and Daniel Stewart's Hospitals for Chair of Commercial Economy	24	0	0			
					9,170	19	7
5.	For Reid Commemoration Concert, from Reid Fund, See A. I. 3 - - -	-	-	-	300	0	0
6.	For Lectures on Forestry from Special Government Grant - - -	-	-	-	100	0	0
7.	For Lectures on Agriculture to Rural Schoolmasters from Special Government Grant - - -	-	-	-	400	0	0
8.	For Pensions to Retired Professors from Parliamentary Grant - - -	-	-	-	2,069	12	3
9.	For Lectureship on the Philosophy of Natural History	50	0	0			
10.	For purchase of Scientific Apparatus from Gilchrist Fund	80	8	10			
11.	For Management of Special Funds from interest of Floating Balances - - -	-	-	-	135	9	2
12.	For Casualty and Expenses on Eskbank Feu-duties	27	19	4			
	Total Destined Income, - - -	-	-	-	£26,257	12	11

C.—TOTAL UNIVERSITY INCOME.

Destined Income as above	-	-	-	-	£26,257	12	11
General Fund Income, as below	£16,694	12	0				
Less Amount destined by Ordinance for Assistants and Class Expenses, entered above, C. 2 (2.)	-	-	735	0	0		
					15,959	12	0
Total University Income	-	-	-	-	£42,217	4	11

D.—INCOME AND EXPENDITURE OF GENERAL UNIVERSITY FUND, 1890-91.

I.—INCOME.

1. Matriculation Fees	-	-	-	-	£3,442	10	0
2. Graduation Fees, viz. :—							
(1.) Arts	-	-	£420	6	0		
(2.) Science	-	-	374	3	0		
(3.) Medicine	-	-	6,859	3	11		
(4.) Divinity	-	-	85	1	0		
(5.) Law	-	-	93	19	0		
					7,832	12	11
3. Fees of Registration of Members of General Council					371	0	0
4. Fees of Admission to Library	-	-	-	-	57	15	0
5. Interest of Invested Funds and Bank Accounts	-				925	0	10
6. From Funds bequeathed to the University for General Purposes, viz. :—							
(1.) General Sir Joseph Straton's Bequest	-	-	£488	18	8		
(2.) Robert Cox's Bequest	-		69	19	10		
(3.) Alexander Gibson's Bequest			65	5	4		
(4.) John Fulton's Bequest,	-		41	19	8		
					666	3	6
7. From Funds partly appropriated to Special Pur- poses, the Surplus Revenues of which fall to the General University Fund, viz. :—							
(1.) Leith Harbour Annuity Fund	£700	1	7				
(2.) General Reid's Trust Fund	699	3	10				
					1,399	5	5
8. From Parliamentary Grant :—							
(1.) Year's grant for Buildings	-	£500	0	0			
(2.) Do., Library	-	575	0	0			
(3.) Unappropriated portion of quarter's grant	-	-	111	12	11		
Carry forward	£1,075	0	0		£14,694	7	8

	Brought forward	£1,075	0	0	£14,694	7	8
(4.)	Balance of Library Grant received from Treasury for period from 20th August 1889 to 31st March 1890	-	351	6	0		
						1537	18 11
10. Miscellaneous Receipts :—							
(1.)	Balance of Humanity Class Fees	£336	7	2			
(2.)	For authority to publish Calendar	100	0	0			
(3.)	For use of Rooms for Meetings, &c.	23	10	0			
(4.)	Sundries	-	2	8	3		
						462	5 5
	Total General Fund Income,	-	-	-	£16,694	12	0

II.—EXPENDITURE.

GENERAL ADMINISTRATION :—

1. *University Court*—

(1.)	Secretary's Salary	-	-	-	£390	0	0
(2.)	Clerks' Salaries	-	-	-	220	3	0
(3.)	Sundries	-	-	-	212	16	7
						£822	19 7

2. *Senatus Academicus*—

(1.)	Secretary's Salary	-	-	£243	15	0	
(2.)	Clerk and Assistant Clerks' Salaries	-	-	292	13	0	
(3.)	Dean of Faculty of Medicine's Do.	97	10	0			
(4.)	Dean of Faculty of Arts' Do.	73	2	7			
(5.)	Dean of Faculty of Divinity's Do.	29	5	0			
(6.)	Dean of Faculty of Law's Do.	48	15	0			
(7.)	Convener of Science Degrees Committee from 13th October 1890 to 1st August 1891	-	-	23	10	5	
(8.)	Sundries	-	-	175	0	7	
						983	11 7

3. *General University Council*—

(1.)	Secretary's Salary	-	-	£9	15	0	
(2.)	Fees to Registrar and Assistants	140	14	0			
(3.)	Meetings, Advertisements, &c.	80	16	11			
						231	5 11
4.	<i>Editing Calendar</i>	-	-	-	-	48	15 0

Carry forward £2,882 18 11

				Brought forward	£2,882	18	11
5. Factors—							
(1.) Salary	-	-	-	£218	9	0	
(2.) Sundries	-	-	-	52	3	4	
							270 12 4
6. Law Agents—							
(1.) General Business Account, including Returns to Universities Commissioners	-			148	6	0	
(2.) Business Account in action the Presbytery of Edinburgh v. The University as to Presbytery Records in Library	-			250	7	1	
(3.) Business Account in connection with opposition to Incorporation of Albert University				84	1	5	
(4.) Business Account to Durnford & Co., Parliamentary Solicitors, London, as to do.	-			43	0	0	
							525 14 6
7. Auditor—	-	-	-	-	-	-	40 19 0
							£2,923 17 11
II. LIBRARY :—							
1. Librarians' Salaries	-	-		£1,000	0	0	
2. Books	-	-		932	16	7	
3. Bookbinding	-	-		131	0	6	
4. Printing, Stationery, &c.	-			227	11	3	
							2,291 8 4
III. MUSEUMS AND TEACHING APPLIANCES :—							
1. Anatomical Museum	-	-		£254	11	0	
2. Botanical Herbarium	-	-		100	0	0	
3. Natural Philosophy Museum	-			50	0	0	
4. Midwifery Do.	-	-		15	0	0	
5. Teaching Appliances	-	-		29	16	6	
							449 7 6
IV. BUILDINGS AND FURNISHINGS :—							
1. Maintenance, Repairs, and Renewals, &c.	-	-					
					£3,461	4	10
V. LIGHTING, HEATING, AND CLEANING	-				1,311	5	0
VI. PUBLIC AND PAROCHIAL BURDENS AND FEU DUTY					448	5	0
VII. INSURANCE	-	-			202	5	2
				Carry forward	£16,059	5	3

				Brought forward	£16,059	5	3
VIII. SERVICE :—							
1. Janitor	-	-	-	£155	0	0	
2. Music Class Room Keeper	-	-	-	30	0	0	
3. Warder and Servitors and their Dress,				749	15	10	
							934 15 10
IX. CLASS ASSISTANTS AND CLASS EXPENSES :—							
1. Allocated by Commissioners' Ordinance	-	-	-	£735	0	0	
2. Allocated since by Senatus	-	-	-	1,628	10	0	
							2,363 10 0
X. EXAMINERS :—							
1. Divinity	-	-	-	£52	10	0	
2. Medicine	-	-	-	831	3	3	
3. Arts	-	-	-	227	10	0	
4. Law	-	-	-	52	10	0	
							1,163 13 3
XI. PRINTING AND ADVERTISEMENTS :—							
1. Printing	-	-	-	£348	11	3	
2. Advertisements	-	-	-	161	1	2	
							509 12 5
XII. MEDALS AND PRIZES :—							
1. Class Medals	-	-	-	£110	16	8	
2. Class Prizes	-	-	-	157	10	0	
							268 6 8
XIII. ORDINARY GRADUATION EXPENSES :—							
M.D. Stamp Duty deducted	-	-	-				188 9 0
XIV. INCIDENTAL GRANTS :—							
1. Athletic Club	-	-	-	10	10	0	
2. University Musical Association	-	-	-	10	0	0	
3. University Golf Club	-	-	-	5	0	0	
							25 10 0
Total General Fund Expenditure	-	-	-	£16,541	10	11	
Add Surplus of Revenue	-	-	-	153	1	1	
Leaving Income	-	-	-	£16,694	12	0	

The University Court.

ABSTRACT OF THE PROCEEDINGS OF THE UNIVERSITY COURT, FROM 1st MAY 1891 TO 1st MAY 1892.

MONDAY, 18TH MAY, 1891.—Sheriff Mackay took his seat, as a member of the Court, on appointment as Assessor for the Chancellor of the University.

The following minute with regard to Professor Campbell Fraser was adopted:—

“On receiving Professor Campbell Fraser’s letter taking farewell of the University Court, on account of his resignation to the Senatus of his place in the Court, the Court desire to record in their minutes their warm appreciation of the services he has rendered to the University of Edinburgh and to the cause of learning. For fourteen years in succession he represented the Senatus on the University Court, having been four times elected under the Act of 1858; while under his fourth appointment he continued to sit as one of four representatives of the Senatus under the Act of 1889. His colleagues recall with pleasure the courtesy and tact which he has shown in all official relations; they feel, too, how much their deliberations have owed to his wisdom, his largeness of view, and his high ideal of academic life and learning. The close of Professor Campbell Fraser’s professoriate, which has extended over thirty-five years, is also the close of a well-marked period in the history of the University of Edinburgh, throughout which he has been one of the leaders of academic thought, and one of the teachers of greatest influence. It is the earnest wish of his friends and former colleagues in the Court that he may still have many years of life left him in which to advance the studies which have made his name known wherever Philosophy is held in honour.”

There were laid before the Court copies of Orders of Her Majesty in Council, received from the Universities Commissioners, approving of Commissioners’ Ordinances Nos. 1 to 7.

It was reported that the sum of £26,000 had been paid by Major Orr Crichton’s trustees to the University Factors, to account of his bequest to the University for Medical Bursaries, and that a sum of £2000 was still due.

It was reported that the Factors had received the Deed of Foundation of the Donald Fraser Bursary in the Physical Sciences, with the stock and money for its endowment. Instructions were given that this gift should now be formally accepted.

It was reported that the Factors had received, through the Secretary

of Senatus, the sum of £147, 10s. for the endowment of the Kelland Memorial Prize. Instructions were given that the acceptance by the Court of the fund should now be intimated to the Kelland Memorial Committee.

On consideration of a Minute of Senatus, the Fee for Students attending the Entomology Class, but who are not or have not been in the Class of Agriculture, was fixed at £2, 2s., and the Entomology Class was placed among those for which the 5s. admission fee may be charged for all persons attending the Class not being matriculated Students for the year of attendance.

A letter was read from the Secretary of Senatus intimating the resignation of the Lectureship on Forestry by Dr Somerville.

It was reported that applications for the Chair of Music had been received from Mr Frederick Niecks, Dumfries, and Mr Frederick James Simpson, Mus. Bac., London.

On consideration of a communication from the Senatus Academicus, it was resolved to grant the loan of certain heraldic MSS. in the Library to the Heraldic Exhibition to be held in the Scottish National Portrait Gallery.

MONDAY, 15TH JUNE 1891.—It was reported that the Draft Ordinances Committee had prepared and sent in a reply to the letter from the Scottish Universities Commissioners with regard to a proposal to omit Section 2 and Schedules A and B from their Draft Ordinance (General No. 5 General Council).

The following Draft Ordinances of the Universities Commissioners were submitted:—(1) Draft Ordinance (General No. 6—Regulations for Degrees in Arts and for the Constitution of Boards of Studies); and (2) Draft Ordinance (General No. 7—Regulations for Degrees in Science). It was reported that the time for lodging objections, &c., to these Draft Ordinances would expire on 26th October next. They were remitted to the Draft Ordinances Committee.

The Additional Examiners in Medicine for 1890 were reappointed for the year from 1st January last.

It was reported by the Finance Committee that a letter had been received from the Scottish Universities Commissioners, fixing the retiring allowance of Professors Sir Herbert Oakeley and A. Campbell Fraser.

Various Bursary and Scholarship awards were reported as having been passed for payment.

It was reported that additional applications had been received for the Chair of the Theory of Music as follows—namely, from (1) Charles H. Lloyd, Mus. Doc., Christ Church, Oxford; (2) Charles E. Allum, Mus. Doc., Stirling; (3) John F. Rowbotham, London; and (4) John Greig, M.A., Mus. Doc., Edinburgh.

Consideration was resumed of a representation by the Students' Representative Council in favour of the final examination in Medicine

being held twice a year. In connection with the matter a Minute of Senatus approving of an opinion of the Medical Faculty on the subject, was submitted. It was resolved that, as recommended by the Medical Faculty, the matter should lie over until the Commissioners' Ordinance on Graduation in Medicine should be issued.

On consideration of Minutes of Senatus and relative reports by the Medical Faculty, recognition for purposes of Graduation in Medicine in the University, under Ordinance No. 8, Section VI. (4) of the Scottish Universities Commissioners, 1858, was granted to the following, viz. :—(1) Dr Alexander Robertson, teacher of Practice of Physic, St Mungo's College, Glasgow; (2) Mr E. E. Prince, teacher of Zoology, St Mungo's College, Glasgow; and (3) Dr F. W. N. Haultain, teacher of Midwifery, Edinburgh.

On consideration of a Minute of Senatus and relative report of their Science Degrees Committee, it was resolved to recognise the Public Health Laboratory of the Liverpool School of Science and Technology as one in which practical instruction is given in the methods of investigating subjects pertaining to Public Health qualifying for Graduation in Science in the University in the Department of Public Health. The Court at the same time granted recognition to George Tait, Ph.D., as teacher of Public Health laboratory work in said laboratory.

MONDAY, 13TH JULY 1891.—There were laid before the Court, Draft Ordinances received from the Scottish Universities Commissioners, viz. :—Draft Ordinance (General No. 8—Regulations as to Examinations), and Draft Ordinance (Edinburgh No. 1—Regulations for Degrees in Medicine). These were remitted to the Draft Ordinances Committee. There were also submitted the following Ordinances of the Commissioners in the form in which they were to be laid before Parliament :—1, Ordinance No. 9 (General No. 4—General Council); 2, Ordinance No. 10 (General No. 5—Assessors of General Council). These were also remitted to the Draft Ordinances Committee.

It was resolved to postpone the October meeting of the Court from the 12th to the 19th, owing to the Senatus meeting falling to be held on the 12th.

The Committee on the proposed Charter of Incorporation of King's College and University College, London, as "The Albert University of London," reported their proceedings.

Various awards of Scholarships, Accounts, &c., were reported as having been passed for payment.

Fees reported by the Senatus as due to several Additional Examiners, were authorised to be paid.

It was reported that additional applications for the Chair of Music had been received from the following, namely :—E. H. Middleton, Mus. Doc., Glasgow; W. B. Alcock, Mus. Bac., Edinburgh; Jacob Bradford, Mus. Doc., London; John Varley Roberts, Mus. Doc., Magdalen College, Oxford; Paul Della Torre, Edinburgh; Thomas

Henry Collinson, Mus. Bac., Edinburgh; R. Machill Garth, Inverkip; Albert Lister Peace, Mus. Doc., Glasgow; and Adolf Beyschlag, Manchester. The Court had under consideration the question of making an appointment to the Chair of Music, and the following resolution was adopted:—"As the Court understand that a Draft Ordinance dealing with the Chair of Music is likely to be issued shortly by the Universities Commissioners, they resolve to postpone the election of a Professor of Music till the month of October next, and meanwhile to intimate that further applications will be received down to the end of September next."

Mr Norman M'Lean, M.A., was appointed to be the Additional Examiner in Classical Literature in the University, for three years from 1st October next.

It was reported that Mr Mark Davidson, LL.B., had resigned the office of Additional Examiner in Law, and that Mr F. P. Walton, LL.B., had been appointed to act in his place at the July examinations. It was further reported that, subject to approval by the Senatus and the Court, the Faculty of Law proposed to arrange that Mr Walton should act as Examiner in Law at the October examinations. The Court approved of these arrangements, and postponed making an appointment for the next full period of office till January next.

The Court appointed the Rev. A. E. Claxton, and Mr Charles Hunter Stewart, M.B., C.M., B.Sc., to be the Assistant Registrars for the revisal, in December next, of the Register of the General Council for 1892.

A letter from Professor Kirkpatrick on the requirements as to History in the Scottish Universities Commissioners' Draft Ordinance on Graduation in Arts, was submitted.

Principal Sir William Muir was reappointed to be a Governor of Fettes Trust for five years from 1st December next.

MONDAY, 19TH OCTOBER 1891.—There were laid before the Court copies of Orders of Her Majesty in Council—(1) Continuing the powers of the Universities Commission till 1st January 1893; and (2) approving of the Commissioners' Ordinance No. 8 (St Andrews, Aberdeen, and Edinburgh, No. 1—Libraries and Museums).

It was remitted to a Committee to frame a Minute referring to the loss sustained by the University through the death of the Chancellor, the Right Hon. John Inglis, D.C.L., LL.D., Lord Justice-General.

It was reported that the late Chancellor's Assessor (Sheriff Mackay) holds office until the next Chancellor appoints an Assessor.

There was submitted a Draft Ordinance of the Scottish Universities Commissioners (Edinburgh, No. 2—Institution of the Faculty of Music, and Regulations for the Reid Professorship), which was remitted to the Draft Ordinances Committee.

Amendments by the Draft Ordinances Committee on the Commissioners' Draft Ordinance (General No. 6—Degrees in Arts), were remitted to a sub-committee for revision and transmission to the Com-

missioners; and the Committee's Amendments on the Commissioners' Draft Ordinance, (General No. 7—Degrees in Science), were remitted to the Draft Ordinances Committee for further consideration.

It was reported that intimation had been received from Dr William Somerville, Lecturer on Forestry in the University, that he was unable to act as Lecturer for the current year.

With reference to the Chair of Music, it was reported: (1) that letters had been received from Dr Lloyd and Mr Carl D. Hamilton withdrawing their candidature; (2) that applications had been received from the following additional candidates—viz. (a), Mr Colin Brown, Glasgow, and (b) Mr Robert Machardy, Edinburgh; and (3) that letters had been received from the General Council of the University, the Scottish Musical Society, and the Edinburgh Society of Musicians, as to the desirability of delaying an election, which were submitted. It was resolved to meet on the 27th inst. to consider the question as to making an appointment to the Chair.

The members of the three Standing Committees—Business and Law, Finance, and Works,—were reappointed for the current Session.

It was reported that the period of office of the following Assessors expires on 30th November next—viz., Dr Heron Watson, Dr Duncan, and Professor Crum Brown.

The indisposition of the Secretary having been reported, it was arranged that Professor Taylor should discharge the Secretary's duties during his absence.

There were laid before the Court Extract Minutes of Senatus intimating the appointment by the respective Professors of the following gentlemen as their Class Assistants for the current Session, viz.:—Mr J. Beard, D.Sc., Ph.D. (Natural History); Mr John William Murray (Hebrew); and Mr Charles M. Douglas, M.A. (Moral Philosophy). The Court approved of the appointments.

Various awards of Scholarships, &c., were reported as having been passed for payment.

There were laid before the Court Extract Minutes of Senatus:—(1) Intimating the Induction of Henry Chester Goodhart, Esq., M.A., as Professor of Humanity; and (2) intimating the Induction of Andrew Seth, Esq., M.A., as Professor of Logic and Metaphysics.

Intimation was made of a bequest by the late Mrs Muirhead, widow of Professor Muirhead, of £500 (free of legacy duty) to the Civil Law Class.

The appointment for this Session, of the following Class Assistants by the respective Professors, was approved:—F. R. Jamieson, M.A. (Humanity); Alexander Douglas Thomson, M.A. (Greek); R. E. Allardice, M.A. (Mathematics); David Hepburn, M.D., C.M., Anatomy; John Gibson, Ph.D., and Leonard Dobbin, Ph.D., (Chemistry).

TUESDAY, 27TH OCTOBER 1891.—The following Minute recording

the loss sustained by the University by the death of the Chancellor was adopted:—"The University Court desire to record their deep sense of the loss which the University has sustained by the death of her illustrious Chancellor, the Right Hon. John Inglis, D.C.L., LL.D. Next to his services to justice and the law, his exertions in the cause of Scottish University reform, and in the administration of the affairs of this University, were the most signal, and the most continuous, of his distinguished career. To him the country is primarily indebted, not only for the passing of the Act which inaugurated a new era in the Universities of Scotland, but for the framing of the Ordinances by which the intentions of the Statute were successfully carried out. When the chief place in this University fell vacant by the death of Lord Brougham in 1868, it was felt that, as no one had earned it so richly, so no one could fill it more worthily; and it is certain that the University never had cause to regret her choice, for she obtained the constant advantage of his sage counsel and his ready help, and he represented in his own person all the habits of mind and all the graces of character which it is the aim of Academic training to develop. The Court believe that within the University his name will long be remembered with veneration and gratitude, and they can desire nothing better for her welfare than that all her Office-bearers and Members should be animated by his spirit, and stimulated by his example."

MONDAY, 16TH NOVEMBER 1891.—It was intimated that the General Council had elected the Right Hon. Arthur James Balfour, M.P., D.C.L., LL.D., &c., Chancellor of the University, and that they had re-elected Dr Heron Watson and Dr John Duncan as Assessors of the Council in the Court.

It was also intimated that the Chancellor had appointed the Principal as Vice-Chancellor of the University, and Sheriff Mackay as his Assessor in the University Court.

It was reported that the Right Hon. J. A. Russell, M.B., was now a Member of the Court, as Lord Provost of Edinburgh, in succession to Sir John Boyd.

Professor Sir William Turner was appointed the representative of the University in the General Council of Medical Education and Registration of the United Kingdom for the period of five years from 18th December next.

The Minutes of Meetings of 19th and 27th ult. were submitted and approved.

Arrangements were made for the appointment in January next, of Examiners as follows:—1, In Divinity, for B.D. Degree; 2, in Law, in room of Mr Mark Davidson, LL.B., Advocate, now Sheriff-Substitute of Lanarkshire, resigned; and 3, in Medicine—(1) *Materia Medica*, (2) *Physiology*, (3) *Pathology*, (4) *Surgery*, and (5) *Clinical Medicine*. It was agreed to advertise these vacancies on an early day.

The appointment by Professor Tait, of Mr W. Peddie, D.Sc., as his Assistant for the current Session, was approved.

In accordance with the requirements of Ordinance No. 8 (Libraries and Museums), the Court appointed their quota of Members of (1) the Library Committee, as follows:—Sheriff Mackay; James Colston, Esq.; Sir Thomas Clark, Bart.; J. Balfour Paul, Esq., Advocate (Lyon King); Ralph Dundas, Esq., C.S.; John Taylor Brown, Esq.; and James Avon Clyde, Esq., LL.B., Advocate; and (2) The Museum Committee, as follows:—The Lord Provost, Dr Patrick Heron Watson, and Dr John Duncan.

It was reported that an application had been received from Mr John Edmund Barkworth, M.A., Mus. Bac., Edinburgh, additional candidate for the Reid Chair of Music. It was resolved to meet on Friday the 20th inst. for the purpose of making an appointment to the Chair.

The Draft Ordinances Committee submitted their amendments on the Commissioners' Draft Ordinance (Edinburgh, No. 2—Institution of the Faculty of Music, and Regulations for the Reid Professorship). The Court approved of the Draft Ordinance as amended, and directed that it should be transmitted to the Commission.

It was reported that various accounts, &c., had been passed by the Finance Committee for payment.

The Class Returns by the University Professors and the Recognised Lecturers in Medicine for 1890-91, were remitted to a Committee to examine and report.

FRIDAY, 20TH NOVEMBER 1891.—It was intimated that this Meeting was a special one, being convened chiefly for the purpose of making an appointment to the Chair of the Theory of Music in the University. Printed lists of Candidates for the Chair being in the hands of the Members, were held as read. The Rector having asked if any Member of the Court was prepared to propose any one of the Candidates for election, it was moved, seconded, and agreed to, that Mr Frederick Niecks be appointed Reid Professor of Music in the University of Edinburgh. Testimony was borne to Mr Niecks' eminence as a musician, musical critic and author, of European reputation.

It was reported that copies of the following Draft Ordinances of the Universities Commissioners had been received, viz. :—(1) (General No. 9—Regulations for Graduation of Women); and (2) (General No. 10—Regulations as to Assistants and Lecturers). These were remitted to the Draft Ordinances Committee.

It was intimated that the Senatus had reappointed Professor Crum Brown as one of their Assessors in the Court.

An application by Mr John Carron for recognition of the Public Health Laboratory of King's College, London; and an application by Professor W. R. Smith, D.Sc., for recognition as teacher of Public Health Laboratory work in said Laboratory, were granted.

Intimation having been received of a gift of valuable Oriental books to

the University, by Mrs C. C. Campbell, daughter of the late Dr Tytler of Calcutta University, the Court resolved gratefully to accept the gift.

MONDAY, 14TH DECEMBER 1891.—It was reported that copies of the Commissioners' Draft Ordinance (St Andrews, Aberdeen, and Edinburgh No. 2—Libraries) had been received. It was intimated that the time for lodging objections or amendments thereon would expire on 11th March next. The Draft Ordinance was remitted to the Draft Ordinances Committee.

The Draft Ordinances Committee submitted their Amendments on the Commissioners' Draft Ordinances (Edinburgh No. 1—Regulations for Degrees in Medicine); and (General No. 8—Regulations as to Examinations). The Court approved of the Committee's Amendments, and directed them to be forwarded to the Commissioners.

It was reported that an application had been received from Professor Matthew Hay, M.D., for recognition of the Public Health Laboratory of the University of Aberdeen, and for the recognition of himself as teacher of Public Health Laboratory work therein, and that it had been sent to the Senatus for their opinion.

It was intimated that Dr John W. Taylor, Scarborough, had resigned the office of Examiner in Medical Jurisprudence, and for the final B.Sc. Examination in Public Health, in the University. It was agreed to advertise the vacancy.

Various Accounts, and awards of Bursaries, &c., were reported as having been passed for payment.

The Finance Committee submitted their Report on the University Accounts for the financial year 1890-91, with an Estimate of Revenue and Expenditure for 1891-92, which was considered and approved.

There were submitted copies of a Memorial by the Senatus to the Scottish Universities Commissioners, on the subject of the Stamp Duty on the M.D. Degree in the Scottish Universities.

There were submitted copies of a Report by the Senatus to the Commissioners as to proposed institution of Doctorate Degrees in Arts, which the Court remitted to their Draft Ordinances Committee.

It was remitted to a Committee to frame a Minute expressive of the Court's regret at the death of Mr John Cook, W.S., Senior Factor for the University.

Copies of a letter to the Universities Commission by the Professor of History in the University, were submitted.

There was laid before the Court a Minute of Senatus intimating that Mr Frederick Niecks, having presented his Commission as Professor of the Theory of Music, had been duly inducted on 12th inst.

The death of Professor Fraser-Tytler, and the consequent vacancy in the Chair of Conveyancing, were reported. Intimation of the vacancy was directed to be made to the parties interested. The Class Returns for 1890-91, along with remarks by a Committee thereon, were submitted. It was intimated that Dr Ebenezer Duncan, Glasgow, had ceased

lecturing on Medical Jurisprudence ; and that Dr Macewen, Glasgow, had ceased conducting Classes in Systematic Surgery. It was resolved to communicate this intimation to the Senatus in order that the list of Recognised Teachers in Medicine may be corrected accordingly.

There was laid before the Court, Extract Minute of Senatus transmitting to the Court an extract from the Trust Disposition and Settlement of the late Mrs Elizabeth Mackie or Trevelyan of Tynholm, Haddingtonshire, bequeathing £1000 to the University of Edinburgh to found "a Scholarship or Prize, to be open to and tenable for a period not exceeding three years by a graduate or student of the said University, for proficiency in Engineering and mechanical and useful arts ; the said Scholarship to be called 'The Arthur Trevelyan Scholarship,' and to be held under such conditions as the Senatus of said University may prescribe." The gift was gratefully received.

A statement of the library expenditure for the first quarter of the current financial year, was remitted to the Finance Committee.

MONDAY, 18TH JANUARY 1892.—Before proceeding to the ordinary business of the Meeting, the Court unanimously resolved to record their profound sorrow at the loss sustained by the Royal Family, and at the calamity which has befallen the Nation and Empire, in the death of His Royal Highness the Duke of Clarence and Avondale. The Court also resolved to address messages of loyal and dutiful condolence and sympathy to Her Majesty the Queen, and their Royal Highnesses the Prince and Princess of Wales.

It was resolved to delay making appointments to the Office of Assistant Registrars for the revival in December next, of the Register of the General Council for 1893, as the Commissioners' Ordinance dealing with the matter, may, in the interval, become final.

Mr T. G. Dickson, C.A., was reappointed auditor of the Financial Report for the Academical year 1890-91 to the Secretary for Scotland.

It was resolved to reappoint the Rev. William Hastie, B.D., and the Rev. Thomas A. Bickerton, B.D., additional Examiners in Divinity in the University. The appointments are for the next period of office of three years, but are subject to any conditions which may be enacted by Ordinance of the Commissioners.

Mr Frederick P. Walton, LL.B., was appointed to be one of the Additional Examiners in Law in the University for three years from 1st inst., in room of Sheriff Davidson, resigned, subject also to the condition above-mentioned.

Appointments to the vacant Examinerships in Medicine were made as follows :—(1) *Materia Medica*—William Craig, M.D., Edinburgh ; (2) *Physiology*—Professor William Stirling, M.D., D.Sc., Owen's College, Manchester ; (3) *Pathology*—Alexander Bruce, M.D., Edinburgh ; (4) *Surgery*—George Thomas Beatson, M.D., Glasgow ; (5) *Medical Jurisprudence*, and for the Second B.Sc. Examination in Public Health—Frederick W. Barry, M.D., D.Sc., Settle. The

appointments are for the current year, but they may be renewed by annual reappointment for a period not exceeding five years. It was resolved to delay till next meeting, making an appointment to the vacant Examinership in Clinical Medicine. The Additional Examiners in the other Branches of Medicine, were reappointed for the current year.

The Committee on Draft Ordinances submitted their Amendments on the Commissioners' Draft Ordinances (General No. 9—Regulations for Graduation of Women), and (General No. 10—Regulations as to Assistants and Lecturers). These Draft Ordinances were considered, further amended, and directed to be forwarded as amended, to the Commissioners. The Committee reported that they had no remarks to make on the Commissioners' Draft Ordinance—(St Andrews, Aberdeen, and Edinburgh No. 2—Libraries).

A proposal that in future the Examination for the Schoolmaster's Diploma should not be restricted to Graduates of the University of Edinburgh, was remitted to a Committee.

Various accounts were reported as having been passed for payment.

A Memorandum by the Finance Committee, on the additional claims which the Court desire to submit to the Universities Commission for consideration when the finances of the University are dealt with, having been submitted and approved, was directed to be transmitted to the Commissioners.

On the report of the Works Committee, various alterations and repairs were authorised to be carried out.

There was laid before the Court, a Joint-Memorial of the Senatus, the Merchant Company, and the University Court, to the Universities Commissioners, having for its object the removal of the seven years' limitation attached to the appointment to the Chair of Commercial and Political Economy and Mercantile Law in the University. The Interim Secretary was authorised to sign the Memorial on behalf of the Court.

There was laid before the Court, a Recommendation of the Library Committee that the reading-room in the Old Buildings should be open every evening of the week, excepting Saturday and Sunday, instead of as at present on Monday, Wednesday, and Friday only. The recommendation of the Committee was adopted.

MONDAY, 15TH FEBRUARY 1892.—It was reported that the following reply to the Court's Address of condolence to the Prince and Princess of Wales had been received :—

“MARLBOROUGH HOUSE, 3rd February 1892.—Sir Francis Knollys is desired to convey to the Members of the University Court of the University of Edinburgh the sincere thanks of the Prince and Princess of Wales for the warm sympathy they have expressed on the occasion of their Royal Highnesses' great bereavement.”

It was resolved to appoint Mr Alexander Leslie, C.E., Additional Examiner in Engineering in the University. The appointment is for

three years from 1st January last, subject to any condition which the Universities Commissioners may impose.

It was also resolved to appoint John Wyllie, M.D., Edinburgh, Additional Examiner in Clinical Medicine in the University for the year from 1st January last.

The Statistical Report for 1890-91 to the Secretary for Scotland was submitted, and remitted to a Committee.

The annual Report on the Library, with Accounts, for 1890-91, was submitted.

On an Application by the Institute of Journalists, the Court granted the use of rooms in the University for meetings to be held by the Institute in September next.

An application for the recognition of the Public Health Laboratory of the University of Aberdeen, as one in which practical instruction is given in the methods of investigating subjects pertaining to Public Health, which shall qualify for Graduation in Science in the Department of Public Health in the University of Edinburgh, and of Professor Matthew Hay, M.D., Aberdeen, as teacher of Public Health Laboratory work in said Laboratory, was granted as recommended by the Senatus.

A gift by Mr W. A. P. Tait, B.Sc., Glasgow, of diagrams of railway work for the use of the Engineering Department, was accepted.

The recommendation of the Business and Law Committee, not to oppose the Leith Harbour and Docks Bill, was adopted.

The Court approved of a recommendation of the Finance Committee to make an annual grant of £50 to the Lecturer on Embryology, towards defraying the expense incurred by him in conducting the Class.

It was reported that various accounts had been passed by the Finance Committee for payment.

Awards by the Senatus of Scholarships were reported as having been passed for payment.

On the recommendation of the Senatus, a grant of £3, 3s. to Mr G. G. Smith, M.A., for adjudicating on the essays for the University Club of London Prize, was authorised.

Various alterations and fittings in connection with the Students' Representative Council Office, the Reid Music Class Room, and the Library, as recommended by the Works Committee, were sanctioned.

The Court having considered the recommendation of the Senatus that the Schoolmaster's Diploma should not be restricted to Graduates of the University of Edinburgh, and relative Report by a Committee of the Court, resolved that the Diploma may be conferred on Graduates of any University whose Degrees in Arts have been sanctioned for the purpose of Graduation in Law, and that the first Regulation now in force with reference thereto, shall be altered accordingly; reserving to the Court the power to reconsider the whole conditions under which the Diploma is granted.

An Application by the British Association for the use of a room

in the University in connection with their meeting in August next, was granted.

It was reported that a copy of each of the following Ordinances, in the form in which they have been transmitted to the Secretary for Scotland for the purpose of being laid before Parliament, had been received from the Universities Commission :—(1) No. 11 (General No. 6—Regulations for Degrees in Arts); (2) No. 12 (General No. 7—Regulations for Degrees in Science); (3) No. 13 (General No. 8—Regulations as to Examinations); and (4) No. 16 (Edinburgh No. 1—Regulations for Degrees in Medicine.

MONDAY, 14TH MARCH 1892.—The following reply to the Court's Address of condolence to Her Majesty the Queen was read :—

"WHITEHALL, 17th February 1892.—I have had the honour to lay before the Queen the loyal and dutiful address of condolence on the melancholy occasion of the death of His Royal Highness the Duke of Clarence and Avondale, submitted by the University Court of the University of Edinburgh; and I have to assure you that this expression of sympathy and devotion has been received by Her Majesty with much satisfaction."

(Signed) "LOTHIAN."

It was reported that intimation had been received from the Universities Commission that the following Ordinances had been laid before Parliament :—No. 11 (General No. 6—Degrees in Arts); No. 12 (General No. 7—Degrees in Science); No. 13 (General No. 8—Examinations); No. 16 (Edinburgh No. 1—Degrees in Medicine); No. 17 (General No. 10—Regulations as to Assistants and Lecturers); No. 18 (General No. 9—Regulations for the Graduation of Women, &c.).

It was reported that the Statistical and Financial Reports for 1890-91 had been forwarded to the Secretary for Scotland; that a copy of each of these Reports had been sent to the Commissioners, and that receipt had been acknowledged. It was also reported that the Additional Examiner in Engineering, and in Clinical Medicine, appointed at last Meeting, had accepted office.

A draft Deed of Foundation of the Lorimer Travelling Scholarship for the encouragement of the study of the Law of Nature and Nations in foreign law schools, by Students and Graduates of the Faculty of Law in the University, was remitted to the Business and Law Committee.

Reports by the Faculty of Arts, as approved of by the Senatus, on (1) The admission of Women to Classes in Arts, and (2) the Courses of Lectures proposed to be given by the Professor of Music during session 1892-93, were remitted to the Business and Law Committee.

The Finance Committee's Reports on (1) The Library Report and Accounts for 1890-91, and (2) Statement of Expenditure for 1889-90 of the Government Grant for lectures in Agriculture to Rural Schoolmasters, were submitted and approved.

The Finance Committee reported that various accounts and awards of Bursaries had been passed for payment.

Reports by the Works Committee on various repairs and services were approved of.

It was reported that a grant of £400 had been received from the Board of Agriculture for instruction in Agriculture to Rural Schoolmasters given during the year ending 31st March 1892. A statement by the Professor of Agriculture, showing details of the distribution of the foregoing Grant, was submitted.

On a representation by Dr A. G. Miller, recognised lecturer in Clinical Surgery, that during his absence in summer his Class would be conducted by Dr C. W. Cathcart, the Court agreed that Dr Cathcart's lectures on Clinical Surgery, delivered in room of Dr Miller, shall qualify for Graduation in Medicine in the University.

A Memorandum as to the present position of the Bequest by the late Signor Theophile Bucher, for Scholarships in Music in the University, was remitted to the Business and Law Committee.

An application for the use of so many rooms in the University as may be required to provide the necessary accommodation for the British Association in connection with their meeting in August next, was granted.

The Court resolved that the next ordinary meeting shall be held on the 11th of April, instead of on the 18th.

MONDAY, 11TH APRIL 1892.—It was reported that intimation had been received from the Commissioners that Ordinance No. 19—(St Andrews, Aberdeen, and Edinburgh, No. 2—Libraries) had been laid before Parliament.

It was also reported that a grant of £100 had been received from the Board of Agriculture towards Instruction in Forestry, for the year ended 31st March last.

The Court granted a request made by Mr J. B. Stephenson, on behalf of the British Pharmaceutical Conference for the use of the Materia Medica Class-room in connection with their meetings in August next. Intimation having been made that the Rev. Dr Wm. L. Davidson's period of office as Examiner in Mental Philosophy will expire on 30th September next, the Court resolved to advertise the vacancy in ordinary course.

The Court approved of the recommendation of the Senatus to institute a class of Physics for Students of Medicine in the ensuing summer session, in order to meet the requirements of the General Medical Council and of the new Ordinance for Graduation in Medicine, the Course to comprise fifty hours of instruction; the fee was fixed at £3, 3s. The Court also approved of the recommendation of the Senatus that the examination in Physics be held at the First Professional Examination in Medicine, and be conducted under the direction of the Professor of Natural Philosophy, with at least one Additional Examiner. The appointment of an Examiner was in the meantime delayed.

The quarterly statement of the Library expenditure was submitted.

The Business and Law Committee submitted the following recommendations in connection with matters which had been remitted to them at last meeting, viz.:—1. To approve of the conditions under which the Lorimer Travelling Scholarship shall be held, as embodied in the draft Deed of Foundation prepared by the Acting Committee of the Association for the Better Endowment of the University of Edinburgh.

2. To make provision within the University for the instruction of Women in the subjects taught in the Faculty of Arts in terms of the report by the Faculty of Arts approved by the Senatus, so soon as Ordinance No. 18 shall become law, and to remit the question of reading and retiring-room accommodation for women students to the Works Committee.

3. To approve of the report of the Senatus on the following Courses of Lectures and Theoretical and Practical instruction to be given by the Professor of Music during session 1892-93 :—(1) History of Music, 20 lectures; fee, £1, 1s. (2) Harmony, Melody, and Rhythm: Theory and Practice; forty lectures, or eighty hours including practice; fee, £3, 3s. Students attending this course, together with either Course No. (1) or Course No. (3) to be admitted to the remaining Course free of charge. (3) Formal and Aesthetical Analysis; twenty lectures; fee, £1, 1s. (4) Occasional recitals and lectures with musical illustrations; free to those attending the foregoing Classes. The committee also recommended the admission of women to these Classes so soon as the Ordinance bearing on the admission of women shall have come into operation. In so far as the report proposed that persons not matriculated students may for the present attend these Classes on payment of an entrance fee of 5s., the Committee recommended that this reduced entrance fee shall apply only to Session 1892-93.

4. With reference to the bequest by the late Theophile Bucher to found Scholarships in Music in the University, the Committee recommended the Court to prepare a scheme setting forth the conditions on, and the period during which, the proposed Scholarships shall be held.

These recommendations were adopted by the Court.

Various accounts, awards of Bursaries, Scholarships, &c., were reported by the Finance Committee as having been passed for payment.

Appendix.



I.—UNIVERSITY LOCAL EXAMINATIONS.

The BOARD grant Certificates of two grades, viz., JUNIOR and SENIOR, the Examinations for which are as nearly as possible on the same level as the Government Lower and Higher Grade Examinations.

The subjects of examination are divided into three classes,—PRELIMINARY SUBJECTS, SPECIAL SUBJECTS, and EXTRA SUBJECTS.

The Preliminary subjects, in which *all* Candidates must undergo Examination, are—(1) English, (2) History and Geography, (3) Latin (optional for girls), (4) Arithmetic, (5) Scripture History *or* French Grammar.

Candidates who have passed the Sixth Standard (Education Code) and the second stage of two specific subjects, of which one at least is a foreign language, are exempted from the Preliminary Examination. For a list of Certificates, granted by other Examining Boards, which exempt Candidates from this Examination, see the *Regulations* published by the Board.

The Special subjects are—(1) for JUNIOR CERTIFICATES : Department A.—Latin, Greek, French, German. B.—English, History, Geography, Scripture History. C.—Mathematics, Natural Philosophy, Physical Geography. (2) For SENIOR CERTIFICATE : A.—(as above), B.—English, History, Geography, Logic, Bible Knowledge. C.—Mathematics, Natural Philosophy. D.—Chemistry, Zoology, Botany, Physiology, Geology. E.—Arithmetic, Commercial History and Geography, Elements of Economics, and either French or German. Candidates for Junior and Senior Certificates must take at least *two*, and not more than *four* subjects,—the former selecting from at least *two* of the Departments A, B, and C, the latter from at least *two* of the Departments A, B, C, and D. The History and Geography papers are subject to special conditions, for which see *Regulations*. In Department E. all the subjects must be taken before a Special Certificate is granted.

The Extra Subjects (optional) for both Certificates are Drawing and Music.

These Examinations have been instituted to supply a common test of attainment both for pupils of public schools and for those privately educated. They are held annually, early in June, at various local

2 *University Certificates in Arts for Women, 1892-93.*

centres in Scotland, England, and Ireland, and also abroad. They are open to boys and girls without restriction as to age.

Candidates may offer themselves for Examination in the Preliminary Subjects alone, and afterwards for the Special and Extra Subjects of the Junior or Senior Certificate; or, they may take the Preliminary, Special, and Extra Subjects, for either Certificate, at one Examination. They may afterwards add to the value of the Certificate by taking one or more subjects. A number of Bursaries are offered in connection with these Examinations.

PRIVILEGES ATTACHING TO THE CERTIFICATES.

1. The Senior Certificate, when it bears that the holder has passed in Latin, Greek, and Mathematics, entitles the holder to enter the University for the *Curriculum of Three Sessions in Arts without further examination*. It is thus equivalent to a recognised *Schools Leaving Certificate* for the Universities of Scotland.

2. The Junior and Senior Certificates exempt from the Medical Preliminary Examinations, in so far as they include the subjects required by the Council; and they are accepted also by the University of Edinburgh.

3. Ladies who hold the Senior Certificate are exempted from the Entrance Examination for Girton College, Cambridge.

4. Holders of the Senior Certificate above eighteen years of age are recognised as Assistants in State-aided schools.

The Board publishes a Report of the Examinations annually, containing copies of the Examination papers, classified lists of the successful Candidates, and Regulations for the following year. Copies of the Regulations, &c., may be had on application to the Clerk of Senatus.

H. CALDERWOOD, LL.D.,	} <i>Joint</i> <i>Secretaries.</i>
S. S. LAURIE, LL.D.,	
G. GREGORY SMITH, M.A.,	

Assistant Secretary.

II.—UNIVERSITY CERTIFICATES IN ARTS FOR WOMEN.

I. Candidates, before they can receive Certificates, must have studied in *at least three* of the Classes of the "Edinburgh Association for the University Education of Women," that are recognised by the Senatus Academicus; and they must also have passed the Senior Local Examinations of the University of Edinburgh, or of one of the other Scottish Universities, or of the Universities of Oxford or Cambridge; or have obtained the Lower Grade Schools Leaving Certificate of the Scotch Department in at least four subjects, and the Honours or Higher Grade Leaving Certificate of the Scotch Department in at least

two subjects ; or have obtained the Higher Grade Schools Leaving Certificate of the Scotch Department in at least five subjects.

II. Candidates who have passed any of the aforesaid Local Examinations may present themselves at the Edinburgh University Examinations for the Certificate in Arts, either in *April* or in *October*—in the subjects of any one or more, or of all of the Classes attended by them. After they have passed in not less than three subjects, they are entitled to receive a University Certificate in Arts.

III. The Classes at present sanctioned and approved by the University are the following :—*Department of Languages and Literature*—English Literature, Latin, Greek, Biblical Criticism, Science and History of Language ; *Department of Philosophy*—Logic and Mental Philosophy, Moral Philosophy, Political Economy, Theory of Education, Fine Art ; *Department of Mathematics and Physical Science*—Mathematics, Experimental Physics, Chemistry, Geology, Botany, Zoology, Physiology, and Astronomy.

IV. The University Certificates in Arts for Women are of two grades—Pass Certificates and Honour Certificates.

V. Honour Certificates in Arts are awarded to those Candidates who, having passed a satisfactory Examination in at least three subjects, have, in a farther and Special Examination for Honours, exhibited high proficiency in any *one* of these three subjects.

VI. Candidates for the *Local Examinations* of the University, which are held annually in June, may obtain, on application to the Clerk of Senatus, University, Edinburgh, printed forms, which are required to be filled up and returned to him, with the fees, on or before 12th May.

VII. Candidates for *Ordinary* and for *Honour* University Certificates in Arts must send their names and addresses, and the subjects in which they wish to be examined, to the *Clerk of Senatus*, together with the fee and proof that they have passed the Local Examinations—before the 12th March or the 1st October in each year.

VIII. The fee for the *Senior Local Examinations Certificate* is £1, 10s., and that for the *University Certificate in Arts* two guineas—to be paid to the Clerk of Senatus. No additional fee is required for an Honour Certificate.

PASS CERTIFICATE.

In accordance with the Regulations for “University Certificates in Arts for Women,” the following days and hours are fixed for Examinations for the PASS CERTIFICATE, viz., in October 1892 :—

Tuesday, 11th October. Latin (9-11, and 11.30-1.30) ; Mathematics (2.30-4.30).

Wednesday, 12th October .	Mathematics (9-11); Greek (11.30-1.30, and 2.30-4.30).
Thursday, 13th October .	Logic and Mental Philosophy (9-12); Experimental Physics (1-4).
Friday, 14th October .	Moral Philosophy (9-12); English Literature (1-4).

And in April 1893 :—

Monday, 3rd April .	Latin (9-11, and 11.30-1.30); Mathematics (3-5).
Tuesday, 4th April .	Mathematics (9-11); Greek (11.30-1.30, and 2.30-4.30).
Wednesday, 5th April .	Logic and Mental Philosophy (9-12); Experimental Physics (1-4).
Thursday, 6th April .	Moral Philosophy (9-12); English Literature (1-4).

The above are the Seven Subjects of Examination necessary for the Degree of Master of Arts under the Regulations now in force. After the new Ordinance for Graduation in Arts comes into operation, Candidates for the Degree may either follow the old Arts curriculum, or select one of the new curricula instituted by the Ordinance; but in either case they must previously have passed the Preliminary Examination.

The days and hours of Examination, in October and April, for Candidates who may select a subject not included in the above subjects, will be arranged after Candidates have given in their names.

The heads of Examination in October 1892 and April 1893 are :—

Latin.—Horace, *Epistles*, i., ii.; *Odes*, iii., iv.; Virgil, *Eclogues*, *Georgics*, i., ii.; Cicero, *Pro Marena*; Tacitus, *Histories*, i. A passage from a Latin Author not prescribed. Latin prose composition. *Roman History*—A general knowledge of Roman History to the death of Augustus, and a special knowledge of the period from B.C. 146 to B.C. 60. *Roman Literature*—A general knowledge of the course of Roman Literature till the end of the Augustan age, and a more special knowledge of the lives and works of Virgil, Horace, Cicero, and Tacitus. *Translation from English into Latin prose is required of every Candidate.*

Greek.—Homer, *Odyssey*, B. xxii.; Euripides, *Helena*; Thucydides, B. iii.; Demosthenes, *Against Androtion* (Wayte's edition recommended). A passage from a Greek Author not prescribed. Greek prose composition. *Greek History*—A general knowledge of Greek History to the death of Alexander, and a special knowledge of the period embraced by the Peloponnesian War. *Greek Literature*—A general knowledge of the course of Greek Literature, and a more special knowledge of the prescribed Authors. Laws of Hexameter and Iambic verse.

Psychology and Logic.—The Elementary Doctrines of Logic and Psychology. Locke's *Essay*, Book II., Chaps. 1-12 and Chap. 23, in connection with "Locke" in "Philosophical Classics" (Blackwood); *Selections from Berkeley* (fourth edition),—Editor's "Introduction," (pp. ix.-liii.); "Principles of Human Knowledge," (Part I. sect. 1-84, pp. 37 to 101); "Divine Visual Language: A Dialogue" (pp. 249-296); Prefatory Notes (pp. 3-7; 159-166), and the footnotes.

Moral Philosophy.—The Class Lectures—"Handbook of Moral Philosophy;" Mill's "Utilitarianism"; Sidgwick's "Outlines of the History of Moral Philosophy," chaps. ii. and iv.

Political Economy.—Fawcett's *Manual*, and the Lectures of the Professor.

English Literature.—Class Lectures of the Course attended. History of the English Language: the first Five Chapters of Morris's "Historical Outlines of English Accidence." History of English Literature, more particularly from 1350 to 1688: Morley's Text-Book, and the portions of Hallam's "Literature of Europe" that relate to English writers of the time mentioned. Special Readings required:—Shakespeare's *Midsummer-Night's Dream* and *King Lear*; Milton's *Sonnets* and his *Paradise Regained*; De Quincey's Essay entitled "*Rhetoric*," and Ascham's *Scholemaster*; Wordsworth's *Prose Prefaces*, &c., to his *Poems*, with Book i. of his *Excursion*.

Mathematics—Arithmetic. Euclid, Books i., ii., iii., iv., and vi., or their equivalent. Algebra, to Quadratic Equations, including the Progressions.

Experimental Physics.—The Class Lectures—Balfour Stewart's *Elementary Physics*.

Chemistry.—The Class Lectures—Wurtz's *Chemistry*.

Geology.—The Class Lectures—Geikie's *Outlines of Geology*.

Botany.—The characteristic features of the following groups and classes of the Plant Kingdom:—Thallophyta [Algæ, Fungi], Muscinæ [Hepaticæ, Musci], Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ], Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)]. The characters of the Natural Orders, Ranunculaceæ, Crucifereæ, Leguminosæ, Rosaceæ, Umbellifereæ, Compositæ, Labiatæ, Urticaceæ, Orchidaceæ, Liliaceæ, Gramineæ, Coniferæ. The fundamental facts of Morphology and Physiology as they are illustrated in the life histories of:—Bacterium, Saccharomyces, Mucor, Vaucheria, Eurotium, Funaria, Aspidium, Pinus, Scilla, Helianthus. Prantl and Vines' "Text-Book of Botany;" Bower and Vines' "Practical Botany."

Zoology.—(a.) The Principles of Classification, and the distinctive characters of the Classes of the Animal Kingdom. (b.) The principles of Geographical Distribution of Animals, and a general knowledge of the Geographical Distribution of the Mammalia. (c.) The structure and habits of the following forms:—Amœba, Hydra, Asterias, Lumbricus, Anodonta, Homarus, Blatta, Ascidia, Gadus, Rana, Lacerta, Columba

Ornithorhynchus, Macropus, Lepus. (*d.*) The Life-History of Aurelia, Ascidia, and Rana. *Text-Books*—Lloyd Morgan's "Biology," and Packard's "Zoology."

Physiology.—The Class Lectures—Huxley's *Physiology*.

Biblical Criticism.—Class Lectures for One Session : Apocryphal Gospels—Hammond's *Outlines of Textual Criticism applied to the New Testament* (or Scrivener's *Introduction* so far as regards MSS. and Versions).

Science of Language.—The Class Lectures.

Astronomy.—Consult Professor as to books.

Fine Art.—Class Lectures of the Course attended. For books on the subject of the Course attended, consult the Professor.

HONOUR CERTIFICATE.

The following days are appointed for Examinations for HONOUR CERTIFICATES in April 1893, when any who have passed the Ordinary Examinations in *at least three Subjects* may present themselves. Candidates may select, as the Subject of an Honour Examination, any *one* of the three Subjects in which they have passed the Ordinary Examination. (See Regulation V.)

Latin—7th April, 9 to 12, and 1 to 4; 8th April, 9 to 12. *Greek*—8th April, 1 to 4; 10th April, 9 to 12, and 1 to 4. *Logic and Metaphysics*—7th April, 9 to 12, and 1 to 4; 8th April, 9 to 12. *Moral Philosophy*—8th April, 1 to 4; 10th April, 9 to 12, and 1 to 4. *Mathematics*—7th April, 9 to 12, and 1 to 4. *Natural Philosophy*—8th April, 9 to 12, and 1 to 4.

The days and hours of Examination for any subject not included in the above will be arranged after Candidates have given in their names.

The heads of Examination are as follows :—

Latin.—Plautus, *Mostellaria*, *Rudens*; Lucretius, v.; Vergil, *Æn.*, iv., v., vi., vii.; Horace, *Odes*; Propertius (Postgate's selections, Macmillan); Juvenal, with omission of ii., vi., ix.; Cicero, *de Oratore*, i., ii.; Tacitus, *Histories*, i., ii., iii., iv.; Latin prose composition, and translation from Authors not prescribed. *Roman History*.—A general knowledge of Roman History to the end of the first century A.D., and a more minute knowledge of the period from B.C. 494 to B.C. 339. *Roman Literature*.—A general knowledge of the course of Roman Literature, and a more minute knowledge of the Authors prescribed.

Greek.—Homer, *Odyssey*, xiii.-xxiv.; Pindar, *Nemean and Isthmian Odes*; Aeschylus, *Thebans*; Plato, *Phædo*; Aristotle, *Nic. Ethics*, i.-iv. (inclusive) and x. Greek Prose Composition; Translation from Authors not prescribed. *Greek History*.—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian Constitution. *Greek Literature*.—A general knowledge of the course of Greek Literature, and a more

minute knowledge of the Authors prescribed. *Greek Grammar*.—As a special subject *Monro's* Homeric Grammar; The principles of Comparative Philology as applied to Latin and Greek. Text-book recommended, “Sounds and Inflexions in Greek and Latin,” by King and Cookson.

Logic and Metaphysics.—A competent knowledge of Logic and Psychology and of the History of Philosophy. Plato, *Theætetus*; Aristotle, *Metaphysics*, Book i.; Descartes, *Meditations*; Locke, *Essay on Human Understanding*, in connection with “Locke” in “Philosophical Classics” (Blackwood); Berkeley, in “Philosophical Classics” (Blackwood); also “*Selections from Berkeley*” (fourth edition); Hume, *Treatise of Human Nature*, Book I.; Kant, *Critique of Pure Reason*; Hegel, in “Philosophical Classics” (Blackwood), and Professor Seth’s *Hegelianism and Personality*.

Moral Philosophy.—Plato’s *Protagoras*. Plato, *Republic*, i.-vii.; Aristotle, *Ethics* (omitting v., vi., vii.); Spinoza, *Ethics*, Parts iii., iv., v.; and Reid’s *Active Powers*, Ess. ii., iv., v.; Kant, *Metaphysic of Ethics*; Hegel’s *Philosophy of the State* (Griggs’s *German Philosophical Classics*); Sidgwick, *Methods of Ethics*; Green’s *Prolegomena of Ethics*, Books ii. and iii.; Herbert Spencer’s *Justice*.

English Literature.—(a.) History and Structure of the English Language: Morris’s *Historical Outlines of English Accidence*, first Five Chapters, with Chapter XII. (entitled “Pronouns”), and Appendices I. and III. (b.) History of English Literature, more particularly from 1250 to 1400, and from 1580 to 1688: Craik’s larger *History of English Literature* and Taine’s *History of English Literature* recommended, in addition to readings in the chief authors of the two periods mentioned. (c.) Special Readings required:—Spenser’s *Faery Queene*, Book I. (Clarendon Press Edition); Bacon’s *Advancement of Learning* (Clarendon Press Edition); Shakespeare’s *Tempest* and *Julius Cæsar*; Milton’s *Lycidas* and *Samson Agonistes*; Johnson’s *Life of Pope*; Wordsworth’s *Prose Prefaces*, Appendix, &c., to his *Poems*, with Books i. and ii. of his *Excursion*; Tennyson’s *Maud* and *In Memoriam*. (d.) English Composition.

Mathematics.—Euclid, I., II., III., IV., VI., and XI., or their equivalent; The advanced portions of the *Elements of Algebra*; *Trigonometry*; and *Conic Sections*, treated geometrically and analytically.

Experimental Physics.—A general knowledge of the subject, such as may be acquired from Stewart’s *Elementary Physics*, or from Lectures of the Three Year Course. In addition, Maxwell’s *Heat*, or Tait’s *Properties of Matter*.

Chemistry.—Wurtz’s *Chemistry*.

Geology.—J. Geikie’s *Outlines of Geology*; Lyell’s *Principles of Geology*.

Botany.—Consult Professor as to books.

Physiology.—Candidates will be examined on all the subjects treated of in Kirkes’ “*Physiology*,” except the *Physiology of the Reproductive Organs and Development*.

Biblical Criticism.—Candidates who desire Honours in these subjects may consult the Professors as to Books, &c.

Science of Language.—The Class Lectures.

Astronomy.—Consult Professor as to Books.

Fine Art.—Class Lectures of the Course attended. For books on the subject of the Course attended, consult the Professor.

Candidates who propose to present themselves at the Ordinary Examinations in October 1892 must intimate their names and addresses to the "*Clerk of Senatus, University of Edinburgh*," before the 1st of October; and at either the Ordinary or the Honour Examinations in April 1893, before the 12th of March—specifying the Subject or Subjects in which they offer themselves, and also the Classes which they have attended, with the Sessions in which they have done so. The Fee should be paid when the Candidate announces her name.

Evidence of having passed the Local Examinations, and also certificates of the necessary attendance in the Classes of the "*Association for the University Education of Women*" must be produced in the Examination Room when the candidate appears to be examined.

GEORGE CHRYSTAL, LL.D.

Dean of the Faculty of Arts.

THE FOLLOWING OBTAINED CERTIFICATES IN APRIL 1892 :—

HONOUR CERTIFICATE.

MARGARET DRUMMOND—*First Class*, English Literature.

PASS CERTIFICATES.

EUPHEMIA L. ADAMS—English Literature, Logic and Mental Philosophy, and Chemistry.

FLORENCE M. C. CHRISTIE—English Literature, Latin, Logic and Mental Philosophy, and Chemistry.

MARGARET DRUMMOND — English Literature, Mathematics, and Chemistry.

ELIZABETH W. GARRETT—English Literature, Moral Philosophy, and Mathematics.

EMILY A. T. MACGREGOR—English Literature, Logic and Mental Philosophy, Geology, and Astronomy.

JESSIE MUIR—English Literature, Latin, Mathematics, and Chemistry.

MAUD A. MURRAY—English Literature, Moral Philosophy, Astronomy, and Chemistry.

KATHERINE C. ROGER — English Literature, Mathematics, and Astronomy.

M. LOUISA THOMSON—English Literature, Latin, and Logic and Mental Philosophy.

III.—CIVIL SERVICE OF INDIA EXAMINATIONS.

The University of Edinburgh now being one of those Institutions selected by the Secretary of State for India, in which Candidates for the Civil Service of India may pass their probation, arrangements have been made by the Senatus for the accommodation of selected candidates. Such selected candidates will be under the supervision of the Principal and Deans' Committee.

The Civil Service Commissioners have been requested to inform Candidates for the Indian Civil Service, that "in the event of their being appointed to the Service, a clause will be introduced into their Covenants by which they will bind themselves to agree to such Regulations for the provision of pensions for their families as may be approved by the Secretary of State for India in Council."

The Examinations are held early in June annually, and are open to all natural-born subjects of Her Majesty, above seventeen years and under nineteen years on the 1st January preceding, who are of sound constitution and good moral character. The fee for the Examination is £5.

The Examination embraces:—English Composition; History and Literature; Greek; Latin; French; German; Italian; Mathematics; and any two of the following Sciences, viz.:—Chemistry; Electricity and Magnetism; Experimental Laws of Heat and Light; Mechanical Philosophy, with outlines of Astronomy; Logic; Elements of Political Economy; Sanskrit; Arabic.

Candidates are at liberty to name any or all of these branches of knowledge. No subjects are obligatory.

Selected Candidates, before proceeding to India, will be on probation for two years, during which time they will be examined periodically, with a view of testing their progress in the following subjects:—Law; Classical Languages of India, viz.—Sanskrit, Arabic, Persian; Vernacular Languages of India; History and Geography of India; Political Economy.

Examinations will be held at the close of the second year of probation, at which it will be decided whether a selected Candidate is qualified for the Civil Service of India. *At this Examination Candidates will be permitted to take up any one of the following branches of Natural Science, viz.:—Agricultural Chemistry, Botany, Geology, or Zoology.*

Candidates will be tested during their probation as to their ability to perform journeys on horseback; and no Candidate will be deemed qualified for the Civil Service of India who fails to satisfy the Civil Service Commissioners of his competence in this respect.

Persons desirous to be admitted as Candidates may obtain all necessary information from "The Secretary, Civil Service Commission, London, S.W.," who will supply forms of application at any time after the 1st December for the Examination following. The forms must be returned on or before 31st March.

IV.—EXAMINATIONS FOR CANDIDATES FOR THE ARMY.

In the Explanatory Memorandum of the Secretary for War, to accompany the Royal Warrant (of 30th October 1871) regulating first appointments, regimental promotion, &c., in the Army, it was announced that "A certain number of Sub-Lieutenancies a year will be allotted to Candidates who have passed the University Examination specified in the Regulations. If they also pass the Examination for the degree of B.A., they will be allowed two years' extension of the limit of age. University Candidates will be required to give at least six months' notice of their desire to be admitted into the Army. If in any year there should be more Candidates than appointments, the requisite number will be chosen by competition between the Candidates; after their appointment they will go through the same course as other Sub-Lieutenants."

In subsequent communications from the War Office it has been announced that "The Examination for M.A. at a Scottish University will be considered tantamount to passing that of B.A. at an English or Irish University;" and that "the Secretary of State for War has accepted an examination at the Scottish Universities, to be defined as 'The Examination for Candidates for the Army,' as equivalent to the examination at the English and Irish Universities for similar candidates, and that the age of such candidates may be extended to 21 years. This examination will consist of three out of the seven examinations required for the degree (M.A.) at the University of Edinburgh; but one subject out of each of the three separate Departments will have to be taken up."

In conformity with the above regulations of the War Office—1st, all who have passed the Examination for the degree of M.A. will be eligible for Commissions in the Army, and will be allowed two years' extension of the ordinary limit of age. 2nd, Those Students who have not passed the M.A. Examination may receive Certificates qualifying them for Commissions in the Army (provided they be not more than 21 years of age) on having attended one class in each of the three Departments of the M.A. curriculum,—that is to say (*a*) either one Greek or one Latin class; (*b*) either Logic, Moral Philosophy, or Rhetoric and English Literature; (*c*) either Mathematics or Natural Philosophy,—and on passing the M.A. Examination, in either April or October, in those three subjects in which the Candidate has attended classes.¹

The names of intending Candidates for Certificates must be given in and fees paid at the *Matriculation Office* at the same time as those of Candidates for the M.A. Examinations.

The Fee for the Examination is two guineas.

Candidates may be exempted from the Preliminary Examination in all subjects except geometrical drawing, if they can produce a certificate of having passed the Preliminary Examination in general education

¹ See Regulations for Degree of M.A.

required of Candidates for graduation in Medicine at the University of Edinburgh, when the Candidate has passed in all the subjects of the Army Preliminary Examination at not more than two examinations.

V.—SYLLABUS OF SUBJECTS OF EXAMINATION FOR STUDENTS OF DIVINITY AND CANDIDATES FOR LICENCE BY PRESBYTERY OF EDINBURGH.

* * *The Examinations shall be conducted mainly in writing.*

An average of not less than 40 per cent. over all the subjects, and a minimum of 30 per cent. in each shall be necessary to a pass, except in Biblical Knowledge, in which 50 per cent. shall be the minimum.

The Examinations, by the favour of the Senatus, will be held in the Examination Hall of the University.

I.—FOR STUDENTS ENTERING THE DIVINITY HALL.

1. BIBLICAL KNOWLEDGE.—Genesis to 2 Samuel, and the Four Gospels.
2. THE SHORTER CATECHISM.

II.—FOR STUDENTS ENTERING UPON THEIR SECOND YEAR.

1. LATIN.—Augustine—Enchiridion.
2. GREEK.—The Epistle to the Colossians as in Lightfoot.
3. HEBREW.—Davidson's Grammar, 1-31; Genesis, i.-ix.
4. DIVINITY.—Confession of Faith, 1-15; Flint's Theism; Row's Manual of Christian Evidences.
5. BIBLICAL KNOWLEDGE.—1 Kings to Nehemiah, and Acts of the Apostles.
6. CHURCH HISTORY.—History of the Church to 325 A.D.

III. FOR STUDENTS ENTERING UPON THEIR THIRD YEAR.

1. LATIN.—Anselm—Cur Deus Homo.
2. GREEK.—St John's Gospel to be read critically, with discussions as to date and authorship.
3. HEBREW.—Davidson's Grammar, 32-49; Psalms i.-xv.
4. DIVINITY.—Confession of Faith, 16-33; The Trinity; The Person of Christ.
5. BIBLICAL KNOWLEDGE.—The Mosaic Ritual and the Prophets.
6. CHURCH HISTORY.—The Reformation Period, with special reference to Scotland.

IV.—FOR CANDIDATES FOR LICENCE.

1. LATIN.—Augustine's Confessions, Book IX.
2. GREEK.—First Epistle of St John, to be read critically.
3. HEBREW.—The Psalms of Degrees.
4. DIVINITY.—Scripture Doctrine of the Atonement. By Professor Crawford.
5. PASTORAL THEOLOGY.—The Pastor as Preacher. By Dr H. W. Smith.
6. CHURCH LAW.—Mair's Digest, Chapters II. and IV.; "Matters affecting all the Courts;" and "The Kirk-Session."

N.B.—By Act of Assembly XX., 1889, all Students of Theology who have completed the prescribed course of Theological instruction shall, before applying to any Presbytery to be taken on trials for licence, be examined by the Synodical Committees already existing for examination of Students entering the Divinity Hall. The Convener of the Edinburgh Synodical Committee is the Rev. Dr Alison, who will give the necessary information.

VI.—THE EDINBURGH UNIVERSITY UNION

The Union is open to all Students and Graduates of the University, and its purpose is "the provision and maintenance of means of social and academic intercourse for its members." The Building, which includes a large hall (in which debates are held), luncheon, smoking, and reading rooms, besides a library and large gymnasium, is situated in Park Street, near both the old and the new buildings. The reading-room is amply supplied with periodicals and newspapers, the smoking-room is furnished with two billiard tables, and the library contains University, Class, Text, and Reference books. A first-class instructor is in attendance at the gymnasium.

President—George Porter. *Hon. Secretary*—Oswald H. Isard.
Treasurer—W. A. Wood, C.A., 28 Frederick Street.

VII.—STUDENTS' REPRESENTATIVE COUNCIL.

FOUNDED 1884.

The aims of the Council are—(1.) To represent the students in matters affecting their interests; (2.) To afford a recognized means of communication between the students and the University authorities; and (3.) To promote social life and academic unity among the students. The Council is elected annually in November, partly by the students

Royal Medical Society, Edinburgh.

of the different Faculties, and partly by the recognised students' societies. Meetings are held in November, December, January, February, March, May, June, July, and October. At the November meeting an executive committee is elected, consisting of three presidents, two secretaries and treasurers, and ten other members, representing the four Faculties.

Presidents—J. G. Cattanach; Robert Munro, M.A.; W. Lyall Wilson, M.A. *Secretaries and Treasurers*—C. R. Gillies Smith, M.A., 35 Drumsheugh Gardens, and D. Milne Watson, M.A., 2 Merchiston Crescent.

DIRECTORY OF STUDENTS' LODGINGS.

(Under the Management of the Students' Representative Council.)

This Directory (containing terms, references, and full particulars) lies open for inspection by Students in the Students' Common Room at the University New Buildings.

VIII.—STATISTICS OF THE RECTORIAL ELECTIONS IN THE UNIVERSITY OF EDINBURGH, 1859-1890.

- 1859.—*Gladstone*, 642.—*Neaves*, 527. Matriculated students, 1302.
1862.—*Gladstone* (*unopposed*). Matriculated students, 1331.
1865.—*Carlyle*, 657.—*Disraeli*, 310. Matriculated students, 1288.
1868.—*Moncreiff*, 607.—*Ruskin*, 425. Matriculated students, 1398.
1871.—*Maxwell*, 594.—*R. Palmer*, 502. Matriculated students, 1533.
1874.—*Derby*, 770.—*Playfair*, 583. Matriculated students, 1767.
1877.—*Hartington*, 932.—*Cross*, 684. Matriculated students, 2102.
1880.—*Rosebery*, 1024.—*Christison*, 985. Matriculated students, 2496.
1883.—*Northcote*—*Blackie*—*Trevelyan*. Matriculated students, 2660.
1886.—*Iddesleigh*, 1094.—*Playfair*, 747. Matriculated students, 2680.
1887.—*Lothian* (*unopposed*). Matriculated students, 2493.
1890.—*Goschen*, 1378.—*Russell*, 805. Matriculated students, 3038.

IX.—ROYAL MEDICAL SOCIETY, EDINBURGH

Founded 1737. Royal Charter granted 1778.

Presidents—Alexander Miles, M.D., F.R.C.S.E.; R. J. A. Berry, M.B., C.M., L.R.C.S.E.; Gerald Fitzgerald, M.B., C.M.; E. B. Fuller, M.B., C.M., L.R.C.S.E. *Secretaries*—A. N. S. Carmichael; R. P. Cockburn, M.B., C.M. *Treasurer*—J. R. Young, Esq.

The Society meets in its hall every Friday evening during the

Winter at 9 o'clock. At these meetings dissertations on medical objects are read and debated, and communications by members on objects of interest discussed. The Society possesses a very fine library, containing about 30,000 volumes, which is constantly being added to. There are comfortable writing and reading-rooms with all the medical journals and periodicals, books of reference and text-books specially useful to students reading for examinations. The museum contains a complete collection of *Materia Medica* specimens, microscopic sections, pathological preparations, herbarium, and a surgical model, on which bandaging, setting of fractures, &c., may be practised.

X.—INTER-ACADEMIC COMMITTEE.

The Principal and Deans Committee of the Senatus and the Inter-Academic Committee of the Students' Representative Council are prepared to give all the assistance and information in their power to Foreigners desirous of studying in the University of Edinburgh, and to Edinburgh University Students desirous of studying in foreign universities. Inquiries may be addressed in writing to the Secretary of Senatus, or to the Convener Inter-Academic Committee, Students' Representative Council, University of Edinburgh.

XI.—ASSOCIATION FOR THE BETTER ENDOWMENT OF THE UNIVERSITY OF EDINBURGH.

President—The Right Hon. Arthur James Balfour, D.C.L., LL.D., M.P., Chancellor of the University. *Vice-Presidents*—The Right Hon. The Earl of Wemyss, LL.D.; The Right Hon. The Earl of Stair, K.T.; The Right Hon. The Earl of Rosebery, LL.D.; The Right Hon. Lord Moncreiff, LL.D.; Sir John Don-Wauchope, Bart.; Sir James Gardiner Baird, Bart.; *Principal Sir William Muir, K.C.S.I., D.C.L., LL.D.

Ordinary Members of the General Committee—(Members of the Acting Committee are marked thus *.)—The Right Hon. John B. Balfour, Q.C., LL.D., M.P.; Edmund Baxter, Esq., W.S.; *Donald Beith, Esq., W.S.; *R. Fitzroy Bell, Esq., Advocate; A. W. Black, Esq.; John Boyd, Esq.; *Sir Thomas J. Boyd; John Carmichael, Esq., LL.D., S.S.C.; Professor Chiene, F.R.C.S.E.; *D. Christison, Esq., M.D.; *John Christison, Esq., W.S.; The Hon. Lord Rutherford Clark, LL.D.; Sir Thomas Clark, Bart.; *Charles Cook, Esq., W.S.; *Henry Cook, Esq., W.S.; *R. Cameron Cowan, Esq., C.A.; Donald Crawford, Esq., M.P., Advocate; John Duncan, Esq., M.D.; *J. R. Findlay, Esq.; *The Rev. Archibald Fleming; *John Harrison, Esq.; James Hope, Esq., W.S.; The Hon. Lord

Kinnear, LL.D.; *Æ. J. G. Mackay, LL.D., Advocate, Sheriff of Fife; *The Hon. Bouverie F. Primrose, C.B.; *Charles Robertson, Esq., B.C.S.; *Robert Simson, Esq., B.C.S.; *George Smith, Esq., LL.D., C.I.E.; James Walker, Esq. of Dalry. *Hon. Secretary*—*Sir Alexander Christison, Bart., M.D. *Acting Secretary*—*John Christison, Esq., W.S., 40 Moray Place.

Local Honorary Secretaries—A. Mercer Adam, Esq., M.D., Boston, Lincolnshire; John Beddoe, Esq., M.D., F.R.S., Bradford-on-Avon; Hugh Cleghorn, Esq., M.D., Stravithy, St Andrews; Sir Dyce Duckworth, M.D., 11 Grafton Street, Piccadilly, London; Peter Gardner, Esq., W.S., 153 St Vincent Street, Glasgow; A. F. Hutchison, Esq., Stirling; James Tait, Esq., W.S., Kelso.

Terms of Membership—Life Subscription, Ten Guineas; Annual Subscription, One Guinea. Subscriptions and Donations in excess of these Sums are earnestly solicited by the Committee.

XII.—UNIVERSITY OF EDINBURGH BUILDINGS EXTENSION SCHEME.

At a Meeting of the Acting Committee for this Scheme, held on 16th November 1885, it was resolved to apply to Parliament for power to acquire houses in Park Street adjoining the present New Buildings as a site upon which to erect a University Hall; and under the Edinburgh University Buildings Extension Act, 1886, the following Members of the Committee, viz.:

Principal Sir W. MUIR, K.C.S.I., D.C.L.,
WILLIAM M'EWAN, Esq., M.P.,
Professor Sir WILLIAM TURNER, LL.D.,
JOHN CHRISTISON, Esq., W.S.,

were incorporated as Trustees by the name of the EDINBURGH UNIVERSITY BUILDINGS EXTENSION TRUSTEES, for the purpose of acquiring the property in question and erecting the Hall.

Mr M'Ewan munificently offered to contribute the sum required to erect the Hall as originally contemplated, and in completion of the architect's design, upon condition of the cost of the site being provided otherwise. The Government was approached on the subject, and a Parliamentary grant of £8000 towards the cost of the site was obtained. Mr M'Ewan having provided the balance required, the site was purchased. Plans for the erection of the Hall by R. Rowand Anderson, LL.D., Architect, were approved of and contracts entered into, and the work is now being proceeded with. By resolution of the Senatus Academicus, the new Hall will be named the "M'Ewan Hall," in grateful recognition of the founder's benefaction.

GEORGE SOMERVILLE, City Chambers,
Clerk to Trustees.

XIII.—UNIVERSITY SOCIETIES AND CLUBS.

i.—THE AGRICULTURAL SOCIETY.

ESTABLISHED 1858.

Honorary President—Principal Williams. *President*—Robert S. Seton. *Vice-President*—James Wilson. *Secretaries*—T. A. Coward, E. W. Caddick. *Treasurer*—James Campbell.

This Society meets weekly on Mondays during the Winter Session at 7.30 P.M.

ii.—ARTS STUDENTS' CHRISTIAN ASSOCIATION.

Hon. President—Rev. A. Wallace Williamson. *President*—J. Hossell Henderson. *Secretaries*—C. A. Macpherson, 1 Ramsay Gardens; R. B. Scott, 18 Chalmers Street. *Treasurer*—R. Lindsay Ross, 5 Chalmers Street.

iii.—ASSOCIATED SOCIETIES OF THE UNIVERSITY.

This Association was instituted in 1833, and is a Union of Literary and Debating Societies. It is composed at the present date of five societies:—The Dialectic, Scots Law, Diagnostic, Philosophical, and Philomathic Societies. The following is the list of the Office-Bearers of the Association, and of the respective component societies:—

Honorary President—The Most Hon. the Marquis of Bute, K.T., LL.D. *Hon. Vice-Presidents*—The Senatus Academicus of the University (*ex officiis*). *Secretary*—L. Clarence D. Douglas, Kilmeny, Merchiston.

1. DIALECTIC SOCIETY.—INSTITUTED IN 1787.

Presidents—W. M. Landale; C. E. L. Cowan; Alex. Hutcheson; W. J. Robertson; R. D. Melville. *Secretary*—J. H. Henderson. *Treasurer*—R. Burns Begg. *Delegates*—The Secretary and A. J. L. Laing.

This Society meets in the Societies' Hall every Thursday Evening at 8 o'clock, for the prosecution of Literary and Philosophical Composition, Criticism, and Debate.

2. SCOTS LAW SOCIETY.—INSTITUTED IN 1815.

Presidents—H. W. Gibson, M.A., LL.B.; J. W. Brodie-Innes, B.A., LL.M., Advocate; and Joseph M. Harkom, B.L. *Secretary*—J. W. M. Loney, Solicitor, 22 George Square. *Assistant-Secretary*—J. B. Young, M.A., LL.B. *Treasurer*—G. F. Mathers, M.A., LL.B.

This Society meets every Monday Evening during the Winter Session, at 8.30 o'clock, for the purpose of debating and reading Essays.

3. DIAGNOSTIC SOCIETY.—INSTITUTED IN 1816.

Presidents—D. Milne Watson, Edward Boyd, J. D. Millar, R. G. Campbell. *Secretary*—G. M. Stuart. *Treasurer*—P. B. Carphin. *Delegates to the Council*—D. Milne Watson and R. D. C. Marshall.

This Society meets every Tuesday Evening during the Winter Session, at 9 o'clock, in the Associated Societies' Hall, for the purpose of debating and reading Essays.

4. PHILOSOPHICAL SOCIETY.—INSTITUTED IN 1871.

Honorary Presidents—The Principal, Emeritus-Professor Campbell Fraser, Professors Calderwood and Seth, and the Gifford Lecturer. *Senior Presidents*—H. Barker and C. M. Douglas. *Junior Presidents*—A. B. Macaulay and H. R. Mackintosh. *Secretary*—J. A. S. Barrett. *Treasurer*—P. Chatterji.

This Society meets in the Associated Societies' Hall every Wednesday evening during the Winter Session, at 8 o'clock, for Philosophical Criticism and Investigation.

5. PHILOMATHIC SOCIETY.—INSTITUTED IN 1858.

Presidents—G. S. C. Stevenson; A. C. Dawson, M.A.; and Robert Lees. *Secretary*—T. M. Ness, M.A.; *Assistant-Secretary*—J. Duncan. *Treasurer*—F. S. Davies, B.A.

This Society meets in the Societies' Hall every Friday evening during the Winter Session, at 8 P.M., for the purposes of debating and reading Essays; and is open to all who are, or have been, Matriculated Students of the University of Edinburgh.

iv.—ATHLETIC CLUB.

President—Dr J. H. A. Laing. *Treasurer*—C. E. W. Macpherson. *Secretary*—W. E. Fothergill.

Open to all Members of the University, and to Students of the Extra-Mural School. The *sections* of the Club are—

1. FOOTBALL (Rugby), FOOTBALL (Association)—*Secretary*—G. St Clair Thom.
2. CRICKET—*Secretary*—I. D. C. Howden.
3. CYCLING—*President*—J. H. A. Laing, M.B.; *Vice-President*—A. Cameron; *Captain*—J. M. Taylor; *Sub-Captains*—F. J. Hare, B.Sc., C. H. Adamson; *Hon. Secretary*—C. R. Edmondson, University Union. Runs held on Saturdays (morning and afternoon) and Wednesday evenings throughout the Summer.
4. LAWN TENNIS—*Secretary*—George Porter.
5. SWIMMING—*Captain*—C. W. Donald; *Secretary*—S. J. Aarons. Races for medals held at intervals of about three weeks during session. Races for blues and half-blues in June. The E.U.S.C. Polo Team meet for practice on Friday afternoons in

the Corporation Baths. 6. HARE AND HOUNDS—*Secretary*—H. M. Green. 7. GOLF (affiliated) Instituted 1881—*President*—

Vice-Presidents—Hon.

Lord Shand, Professors Nicholson, Chiene, and Dr Argyll Robertson. *Captain*—D. A. Stevenson, C.E. *Treasurer*—C. L. Blaikie, C.A., 88 George Street. *Secretary*—T. A. Begbie, 90 Thirlstane Road.

Field—Corstorphine. Gymnasium—University Union. Address all communications to *Hon. Sec. E.U.A.C.*, University Union.

v.—CELTIC SOCIETY.

INSTITUTED 1848.

Honorary President—Professor Mackinnon. *Presidents*—Alexander John Kennedy, Neil MacMichael, George Morton, M.A. *Secretary*—Archibald MacLeod. *Assistant Secretary*—Thomas Fraser. *Treasurer*—Thomas MacPherson.

This Society meets in the Societies' Hall every Saturday evening during the Winter Session at 7 P.M., for debating and reading essays. Literary business conducted in Gaelic every third evening.

vi.—CHEMICAL SOCIETY.

INSTITUTED 1874.

President—Professor A. Crum Brown, M.D., D.Sc. *Vice-Presidents*—Hugh Marshall, D.Sc., F.R.S.E.; J. Rymer Paterson, B.Sc. *Secretary*—Thos. S. Murray, D.Sc. *Treasurer*—Fred. Beddow. *Librarian*—Leonard Dobbin, Ph.D., F.R.S.E.

This Society meets on alternate Wednesdays at 8 P.M. during the Winter Session, for the reading and discussion of papers on Chemistry and allied sciences.

Excursions to chemical works, &c., during the Summer Session.

vii.—DARWINIAN SOCIETY.

President—Professor Ewart. *Chairman*—J. Graham Keir. *Treasurer*—James Adamson, M.A., B.Sc. *Secretaries*—John S. Flett, Robert Pollok, M.A.

The Society meets every alternate Tuesday evening, at 8 P.M., in the Senior Natural History Class-Room.

viii.—DUMFRIESSHIRE AND GALLOWAY LITERARY SOCIETY.

INSTITUTED 1847.

Presidents—James M'Donald, John Gordon, John Stafford, Alexander Innes. *Joint-Hon.-Secretaries*—Robert Andrew Grierson, John Proudfoot. *Hon. Treasurer*—James Kissock.

The Society meets every Saturday evening in the Public Law Class-Room, at 7 P.M.

ix.—UNIVERSITY FREE CHURCH SOCIETY.

INSTITUTED 1886.

Honorary President—A. Taylor Innes, Esq. *Presidents*—A. M. Mair, J. Beattie. *Secretary*—Ewen Fraser. *Assistant Secretary*—J. H. Scott. *Treasurer*—E. A. Davidson.

The object of this Society is to promote the friendly intercourse of its members, socially and intellectually. Meetings are held every Saturday evening during the Winter Session in Dr Moxey's Class-Room, F.C. College, Mound, at 7 P.M.

x.—MEDICAL STUDENTS' CHRISTIAN ASSOCIATION.

Honorary President—Professor Simpson, M.D. *Honorary Vice-Presidents*—Professors Sir Douglas Maclagan, M.D.; Grainger Stewart, M.D.; Crum-Brown, M.D.; Greenfield, M.D.; Chiene, M.D.; Dr A. G. Miller, Dr C. W. Cathcart, Dr A. H. F. Barbour, Dr Peel Ritchie, Dr G. W. Ballantyne. *President*—R. M. Leslie, M.A., B.Sc., 37 Argyle Place. *General Secretaries*—Thomas Gibson, M.A., 1 Bright's Crescent; J. E. Bowes, 23 Marchmont Crescent. *Ward Service Secretaries*—G. Newman, 3 Warrender Park Road; A. G. Fenn, 8 Hartington Place. *Treasurer*—C. K. Millard, 14 Spottiswoode Street.

The object of this Association is, stated briefly, to form a bond of union between Medical Students whose principles and aim in life are Christian. All Medical Students approving of this object may enrol their names as members.

The work of the Association includes :—1. Weekly Prayer Meetings on Sunday mornings at 10.5 A.M. in the chapel of the New Royal Infirmary; 2. Ward Services every Sunday morning at 9.30 A.M.; 3. Social Meetings for mutual intercourse; 4. General Students' Meetings on Sunday evenings.

xi.—MISSIONARY ASSOCIATION.—INSTITUTED 1825.

Honorary President—Principal Sir W. Muir, K.C.S.I., D.C.L. *Honorary Vice-Presidents*—Professors Calderwood, Charteris, Butcher, and Sir Douglas Maclagan. *President*—T. Lawrie Symington, M.A. *Vice-President*—John Hunter, M.A. *Treasurer*—W. Melville Sym, C.A., 49 N. Castle Street. *Secretary*—John Henry Dickie, M.A., 35 Scotland Street. *Assistant Treasurer*—J. Muirhead, M.A. *Assistant Secretary*—J. K. Wilkin, M.A. *Librarian*—W. S. Crockett. *Assistant Librarian*—J. E. Mackay, M.A.

The Association meets to transact business, in the Public Law Class-Room on alternate Saturdays, at 10 o'clock.

xii.—MUSICAL SOCIETY.—ESTABLISHED 1867.

Patron—H.R.H. The Duke of Edinburgh.

President—Professor Rutherford. *Vice-Presidents*—Principal Sir W. Muir, K.C.S.I.; Professors Annandale, Armstrong, Butcher, Calder-

wood, Flint, Kirkpatrick, Maclagan, Niecks; and D. Hepburn, M.D. *Hon. or Corresponding Vice-Presidents*—The President of Aberdeen University Musical Society; Prof. Sir Robert Stewart, Dublin, and Prof. Sir John Stainer, Oxford. *Hon.-Treasurer*—W. C. Sillar, M.B. *Hon.-Secretary*—J. Lawrence Ferris.

Orchestral practice on Fridays at 7.15 P.M., during the Winter Session, in the Music Class-Room, Park Place.

xiii.—PHYSICAL SOCIETY.

Presidents—Alex. Morgan, M.A., B.Sc.; Cargill G. Knott, D.Sc., F.R.S.E. *Secretary and Treasurer*—J. B. Clark, M.A., F.R.S.E., Heriot's Hospital School.

This Society meets every third Tuesday, during the Session, at 8 P.M., for the discussion of subjects connected with Mathematical and Experimental Physics.

xiv.—PHOTOGRAPHIC SOCIETY.

Honorary-President—Professor A. Crum-Brown. *President*—Dr Thomas Drinkwater. *Vice-President*—Dr Paterson. *Treasurer*—Mr Alex. Thomson. *Secretaries*—Messrs C. Pearce and A. Cameron.

All past and present Students eligible. Dark-rooms, Studio, &c., at 3 Bristo Place, free to Members at any time. Monthly meetings during sessions. Excursions in summer time.

xv.—UNIVERSITY BATTERY SHOOTING CLUB.

Honorary President—Captain Cossar Ewart. *President*—Sergeant-Major T. E. Saxby. *Secretary and Treasurer*—Ernest E. Waters, University Union.

This Club is open to Members of No. 2 (University) Field Battery E.C.A.V. Competitions at Hunter's Bog, and at Caroline Park, Granton, on stated dates. Prizes given at the end of the season for the best individual and aggregate scores.

xvi.—THE UNIVERSITY RIFLE COMPANY SHOOTING CLUB.

INSTITUTED 1873.

Honorary-President—Lieut.-Col. Sir Wm. Turner. *President*—Captain I. B. Balfour. *Vice-Presidents*—Captain J. P. Bannerman, and Lieutenant E. H. Robertson. *Secretary and Treasurer*—Lieutenant J. A. Hope. *Committee*—Col.-Sergeant H. G. Melville, Sergeant G. Wallace, Lance-Corporal G. Grey; Privates J. Bowie, D. Menzies, J. A. Benson, and Peach.

This Club is open to members of No. 4 (University Co.) Q.R.V.B.R.S. Weekly competitions at Hunter's Bog. Prizes given at the end of the season for best aggregate scores.

xvii.—SHINTY CLUB.

Honorary President—Emeritus-Professor Blackie. *Honorary-Vice-President*—Professor Mackinnon. *Captain*—Chas. A. Stuart-Black, M.A. *Vice-Captain*—Hugh Gunn. *Secretary and Treasurer*—Victor A. Ross.

The Club meets at Inverleith Park every Saturday.

xviii.—THEOLOGICAL SOCIETY.—INSTITUTED 1776.

Honorary President—Rev. Professor Flint. *Honorary Vice-Presidents*—Rev. Professors Taylor, Adams, and Charteris. *Presidents*—James A. Robertson, M.A.; William B. Stevenson, M.A.; A. W. Fergusson, M.A.; A. J. Miller, M.A. *Secretary and Treasurer*—James E. Mackay, M.A.

This Society is open to present and past Students of any Theological Seminary. It meets every Friday evening during the Winter Session, at 8.30 P.M., for debates and discussions on questions of Theology, Church History, Biblical Criticism, General Ecclesiastical Polity, and kindred subjects.

xix.—UNIVERSITY HALL.

2 MOUND PLACE and RIDDLE'S COURT (5 Victoria Terrace).

FOUNDED MAY 1887.

University Hall is designed as a social residence for students. Both buildings are situated within a short distance of the University. The accommodation includes common rooms, private studies, and bedrooms. The rents range from 7s. to 16s. per week. The cost of board averages 12s. 6d. each per week.

The external affairs of the Hall are in the hands of the following Consulting Committee:—Lord Stormonth Darling; Professors Butcher, Chiene, Kirkpatrick, Crum-Brown, Geddes; Æneas Mackay, Esq.; R. Fitzroy Bell, Esq.; W. K. Dickson, Esq.; Dr George Mackay, Dr Hunter Stewart, James Macdonald, Esq.; R. C. Gray, Esq., S.S.C.; J. F. Mackay, Esq., W.S.; Dr Caird, and three representatives from those in residence. J. Arthur Thomson, Esq., is Secretary of this Committee.

The internal affairs are managed by a committee of residents elected monthly. Application for admission should be made to the Hon. Sec. at University Hall.

xx.—UNIV. U.P. STUDENTS' SOCIETY.—INSTITUTED 1843.

Honorary Presidents—Professor Crum Brown, M.D.; Rev. Professor Henry Calderwood, LL.D.; Rev. John Hutchison, D.D.; Rev. Armstrong Black. *President*—P. F. Gillies, B.Sc. *Vice-Presidents*—Thomas Henderson, Wm. Watson. *Secretary*—Alexander B. Macdonald. *Treasurer*—Edwin Rogerson.

The Society meets every Saturday evening during the Winter Session, in the U.P. College Buildings, Castle Terrace, at Seven o'clock; an hour earlier on Magazine Meetings.

XIV. — COMMISSIONERS' ORDINANCES UNDER UNIVERSITIES (SCOTLAND) ACT, 1889, AS LAID BEFORE PARLIAMENT, WHICH MAY COME INTO OPERATION ON 1ST OCTOBER 1892.

I. ORDINANCE NO. II, [GENERAL NO. 6.—REGULATIONS FOR DEGREES IN ARTS.]

At Edinburgh, the 3rd day of February 1892 years.

WHEREAS by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, sub-section 5, to regulate the management and ordering of the Universities, and the manner and conditions in and under which students shall be admitted thereto, and in particular (*b*) the course of study and manner of teaching, the length of the academical session or sessions, the manner of examination, the qualifications, appointment, and number of examiners, and the amount and manner of their remuneration; (*d*) the granting of degrees, and the institution of new degrees; (*e*) the institution of an examination either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations; and by the said section 14, sub-section 16, to repeal or modify any Ordinance made under the provisions of the Universities (Scotland) Act, 1858.

Therefore the Commissioners under the first-mentioned Act statute and ordain as follows:—

ACADEMICAL YEAR.

I. (1) The Academical year in each University shall commence on the first day of October. The classes shall meet for the winter session (which shall include not less than twenty teaching weeks) on such day thereafter as the Senatus of each University shall determine; and shall close not later than the tenth day of the following April.

(2) The University Court of each University shall institute a summer session in such of the subjects or branches of subjects qualifying for graduation in Arts as may be determined by the said Court after consultation with the Senatus. Such session shall commence on such day in May as the Senatus of each University shall determine, and shall include ten teaching weeks at least. The classes shall be conducted by the Professors, or by Lecturers appointed under Ordinance, General, No. 10 (Regulations as to Assistants and Lecturers). Provided that the teaching of classes during the summer session shall be optional to any Professor whose commission is dated before the approval of this Ordinance by Her Majesty in Council, unless such

option is barred by the terms of his commission or of any existing Ordinance.

II. The Curriculum for the degree of Master of Arts (M.A.) shall extend over not less than three winter sessions, or two winter sessions and three summer sessions.

PRELIMINARY EXAMINATION.

III. (1) Before entering on the Curriculum each student shall pass a Preliminary Examination in the following subjects :—

1. English.
2. Latin or Greek.
3. Mathematics.
4. One of the following :—Latin or Greek (if not already taken), French, German, Italian, Dynamics.

(2) The examination must be passed in the matters and on the standards hereinafter defined ; but there shall be a higher and a lower standard in Latin, Greek, and Mathematics.

Candidates must pass on the higher standard in at least one of these three subjects, and may pass on the lower standard in either or both of the remaining two ; subject always to the conditions relative to attendance contained in Section IV. hereof.

(3) English shall include Grammar and Composition, and the outlines of Geography and British History, and the standard shall not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(4) Latin and Greek shall comprise grammatical questions, translation into English from Latin or Greek authors not previously prescribed, and translation of plain passages or easy sentences from English into Latin or Greek. The higher standard shall not be lower than that presently adopted in the examination for a Curriculum of three sessions, or for the Higher Grade Leaving Certificate of the Scotch Education Department, and the lower standard shall not be lower than that presently adopted for the Lower Grade Leaving Certificate of the said Department.

(5) French, German, and Italian shall comprise grammatical, literary, and easy philological questions, translation into English from French, German, or Italian authors not previously prescribed, and translation from English into French, German, or Italian ; and the standard shall not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(6) Mathematics on the lower standard shall comprise—(1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest ; (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations ; (3) Geometry—Euclid, Books I., II.,

and III. (or their equivalents), with easy deductions. Demonstrations other than Euclid's will be accepted if they assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

(7) Mathematics on the higher standard shall, in addition, comprise Euclid, Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with deductions, Quadratic Equations, Trigonometry to the solution of Triangles inclusive, and the use of Logarithmic Tables.

(8) Dynamics shall mean the Elementary Statics and Kinetics of Solids, Liquids, and Gases.

(9) A candidate shall be obliged to pass in all the required subjects at one or not more than two examinations; provided that he may repeat his second examination as often as may be necessary, being examined on each occasion in all the subjects in which he failed, or which he did not profess, at his first.

For the purposes of this sub-section, a candidate's first examination shall be held to be the first at which he passes in any of the subjects professed.

IV. (1) Attendance on any class shall not qualify for graduation, unless the whole Preliminary Examination has been passed.

(2) Attendance on a class in any language included in the Preliminary Examination, or in Mathematics, shall not qualify for graduation, unless the candidate, before entering the class, has passed the Preliminary examination in that subject, and on the higher standard where a double standard is provided. He may, for that purpose, attend any Preliminary Examination held during the course of his study, taking only the paper set in that subject; provided always that the provisions of the sub-section immediately preceding shall have been satisfied.

(3) Attendance on a class in any language not included in the Preliminary Examination shall not qualify for graduation, unless the candidate has previously passed an examination in that language on a standard as nearly as possible equivalent to the higher standard of the languages included in the Preliminary Examination.

V. (1) The Preliminary Examination shall be held at each University twice in each year, under such regulations as the Senatus, with the approval of the University Court, shall from time to time determine, and shall be conducted in writing.

(2) The Joint Board of Examiners to be appointed under the provisions of Ordinance No. 8 (Regulations as to Examinations), shall have power to accept the Higher Grade Leaving Certificate of the Scotch Education Department in any subject as an equivalent for the Preliminary Examination in that subject; and to accept the Lower Grade Leaving Certificate of the said Department as an equivalent for the Preliminary Examination on the lower standard in Latin, Greek, and Mathematics; provided they are satisfied that the standard of the

examination, at which the said certificates were granted, is not lower than that required by this Ordinance.

(3) The Joint Board of Examiners shall have power to determine what examinations, if any, other than those for the Leaving Certificates of the Scotch Education Department may be accepted as equivalent to the Preliminary Examination in whole or in part, provided they are satisfied that such other Examinations are in fact equivalent thereto.

ORDINARY DEGREE.

VI. Candidates for the ordinary degree of Master of Arts may follow the curriculum and take their degree in the subjects hitherto recognised for graduation, as provided by the regulations contained in Ordinances Nos. 12, 14, 18, and 69 of the Commissioners under the Universities (Scotland) Act, 1858, subject always to the preceding provisions of this Ordinance; or they may vary the curriculum for graduation under the regulations contained in the immediately succeeding sections.

VII. (1) Candidates shall attend full courses in at least seven subjects, and shall be examined on these subjects.

(2) Of these subjects four must be (*a*) Latin or Greek; (*b*) English or a Modern Language or History; (*c*) Logic and Metaphysics, or Moral Philosophy; (*d*) Mathematics or Natural Philosophy.

(3) The remaining subjects may be selected by the candidates from the Departments specified in Section IX. of this Ordinance, under the following condition:—That the whole subjects taken shall include either (*a*) both Latin and Greek, or (*b*) both Logic and Moral Philosophy, or (*c*) any two of the following three subjects,—Mathematics, Natural Philosophy, and Chemistry.

VIII. (1) Each of the subjects must be studied in a full course of not less than one hundred meetings of the class on separate days, except in cases where the Senatus, with the approval of the University Court, shall have sanctioned, as qualifying for graduation, half courses of not less than fifty meetings on separate days; or where the Senatus, with the approval of the said Court, shall, having regard to the nature of the subject, sanction full courses of less than one hundred or of less than fifty meetings respectively.

(2) Two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) Where a subject is taught in a practical class, as well as in a systematic class, the Senatus, with the approval of the University Court, shall regulate the course of study and determine the relative proportion of lectures and laboratory or practical work.

IX. The Departments of Study for graduation in Arts in each University shall, if adequate instruction is provided, include the following subjects, with such additions or modifications in any University as may hereafter be made by Ordinance of the University Court:—

1. Language and Literature.

Latin.	Italian.
Greek.	Sanskrit.
English.	Hebrew.
French.	Arabic or Syriac.
German.	Celtic.

2. Mental Philosophy.

Logic and Metaphysics.	Education (Theory, History, and Art of).
Moral Philosophy.	Philosophy of Law.
Political Economy.	

3. Science.

Mathematics.	Zoology.
Natural Philosophy.	Botany.
Astronomy.	Geology.
Chemistry.	

4. History and Law.

History.	Constitutional Law and History.
Archæology and Art (History of).	Roman Law.
	Public Law.

X. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the ordinary degree of Master of Arts on payment of the fees required.

DEGREE WITH HONOURS.

XI. (1) The degree of Master of Arts may be taken with Honours in any of the following Groups, in which Honours Classes shall have been established in at least two subjects :—

- (a) Classics (*i.e.*, Latin and Greek, with optional subjects such as Comparative Philology, Ancient Philosophy, and Classical Archæology).
- (b) Mental Philosophy.
- (c) Mathematics and Natural Philosophy.
- (d) Semitic Languages.
- (e) Indian Languages.
- (f) English (Language, Literature, and British History).
- (g) Modern Languages and Literature.
- (h) History.

(2) Every candidate shall take up at least five subjects. Two of these subjects, under separate Professors or Lecturers, must be selected from the candidate's Honours Group; and the five subjects shall include one from each of the Departments of Language and Literature, Mental Philosophy, and Science, set forth in Section IX. of this Ordinance.

(3) Every candidate shall attend seven Classes, taking two Classes (one of which shall be an Honours Class) in each of his Honours subjects.

(4) A candidate who has obtained Honours in any one Group may, before graduating, present himself again for examination in a second Honours Group. In such a case, he shall not be required to attend more than two additional Classes, which shall be Honours Classes, in the second Group.

(5) The examination in the subjects comprised in the candidate's Honours Group shall be of a higher standard than that required for the ordinary degree of Master of Arts. In his other subjects the standard shall be that required for the ordinary degree.

(6) The Senatus shall, subject to the provisions of Sections XVI. to XX. of this Ordinance, from time to time determine what subjects shall be comprised in each Group, what subjects may be taken in half courses, and in which Group they may be taken : Provided that no new Group shall be instituted except by Ordinance of the University Court.

(7) The provisions of Section VIII. of this Ordinance shall apply to Candidates for Honours ; but, in their case, not fewer than fifty meetings, on separate days, extending over an entire winter session, shall constitute a full course for an Honours Class ; and not fewer than twenty-five meetings on separate days, extending over half a winter session, or an entire summer session, shall constitute a half course.

XII. (1) Every candidate shall include Latin, or Greek, either in his Honours Group or as one of the subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

(2) Greek shall be compulsory for candidates for Honours in Mental Philosophy.

(3) Candidates for Honours in English, or Modern Languages and Literature, or History (Groups *f*, *g*, *h* of Section XI. hereof) shall include within the whole subjects taken for their degree (*a*) Logic and Metaphysics or Moral Philosophy, and (*b*) Mathematics or Natural Philosophy.

XIII. (1) The whole examination in the candidate's Honours Group must be taken at one time, and the whole examination necessary for graduation with Honours must be taken within five years from the date of the candidate's first matriculation after having passed the Preliminary Examination, unless that period shall be extended by the Senatus on special cause shown ; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the extension.

(2) Candidates for Honours may be examined, at any time during their curriculum, in the three subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

XIV. (1) A candidate who has passed the examinations necessary for the ordinary degree of Master of Arts, but who has not yet graduated, may present himself for Honours within five years from the date of his first matriculation after having passed the Preliminary Examination, and

shall not be required to attend further classes:—subject always to the provisions of Section XII. hereof.

(2) No one shall be allowed to present himself a second time as a candidate for the degree of Master of Arts with Honours, who, upon examination, has failed to obtain Honours.

(3) A candidate shall be held to have presented himself who has notified his name for examination in accordance with the University regulations. But it shall be in the power of the Senatus to relax this rule on special cause shown; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XV. (1) In each Group there shall be three Grades of Honours, to be denominated respectively the First, Second, and Third Class. The names of the candidates entitled to Honours in each class shall be arranged in alphabetical order.

(2) For the degree of Master of Arts with Honours a Diploma shall be given setting forth the subjects in which he has taken Honours.

BOARDS OF STUDIES.

XVI. The Senatus of each University shall from time to time institute Boards of Studies corresponding as nearly as may be to the Departments of Study enumerated in Section IX. of this Ordinance.

XVII. Each Board of Studies shall consist of such Members of the Senatus and Lecturers in the University as the Senatus may from time to time select, and the Senatus shall appoint one of the Members of the Board to be Convener thereof.

XVIII. Before the end of each winter session each Professor and Lecturer in the said Departments of study shall submit to the proper Board of Studies for its approval a syllabus of the subjects and books proposed for the work of his class for the next Academical year. As soon as such approval has been given, the syllabus shall be transmitted to the Faculty of Arts for its consideration. The syllabus, with such observations as the Faculty of Arts may see fit to make thereon, shall then be transmitted to the Senatus for its sanction.

XIX. (1) Before the end of each winter session each Board of Studies shall prepare a scheme, defining, for the Academical year next but one following, the classes which shall be deemed to be Honours classes, and the subjects and courses of reading for Honours in its Department, and shall report the same to the Faculty of Arts for its consideration. The scheme, with such observations as the Faculty of Arts may see fit to make thereon, shall then be transmitted to the Senatus for its sanction.

(2) Each Board shall in like manner make recommendations through the Faculty of Arts to the Senatus in regard to the half courses which may be sanctioned under the provisions of this Ordinance, and the lectures which may be given on special subjects.

XX. The Principal and the Dean of the Faculty of Arts shall be *ex-officio* Members of each Board of Studies. The Convener shall pre-

side, and, in his absence, each meeting shall appoint its own Chairman, and every Chairman shall have a deliberative, and, in cases of equality, a casting vote.

GENERAL.

XXI. In the case of a student whose native language is other than European, the Senatus may, at the Preliminary Examination, accept such language as a substitute for a modern European language. The Senatus may also in such a case accept as an alternative to Latin or Greek any other classical language, such as Sanskrit or Arabic, subject always to the provisions of Section IV. Sub-section 3 hereof.

XXII. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class as qualifying for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XXIII. The examination in all the languages in the Curriculum shall, as far as possible, be on the same standard in Examinations for the same degree, and shall in all cases test the candidate's knowledge of the history and literature of the several countries.

XXIV. A candidate for the degree of Master of Arts shall not be deemed to have attended a class as part of the Curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XXV. A student, who has given attendance at classes recognised as qualifying for graduation during one or more sessions in any one or more of the Scottish Universities, may complete his Curriculum by giving attendance during the remainder of his course in another Scottish University, and may proceed to a degree in the latter University in the same way, in all respects, as if the previous part of his Curriculum had been taken therein: Provided always that every such student shall be bound to produce, to the satisfaction of the Senatus of the latter University, certificates of his having passed the Preliminary Examination, and of his attendance at the former University or Universities, and shall be examined in all the subjects necessary for a degree of Master of Arts by the Examiners of the University in which he completes his Curriculum, and in which alone he shall be allowed to graduate; and that no such student shall be admitted to a degree in any University unless he has given attendance in such University during the last winter session of his Curriculum, and one other winter session or two summer sessions.

XXVI. A candidate for the degree of Master of Arts with Honours, who has failed to be placed in any class, may, provided that in the opinion of the Examiners he has given evidence of sufficient attainments in any subject for the ordinary degree of Master of Arts, receive from them a certificate of having passed in such subject, which shall count

pro tanto as part of the examination required under the regulations for the ordinary degree of Master of Arts.

XXVII. The degree of Master of Arts shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

XXVIII. A student who, at the time when this Ordinance shall come into operation, shall have commenced his course of study with a view to graduation in Arts in any of the Scottish Universities under the regulations in force at the time in such University, may complete his course and become a candidate for the degree of Master of Arts, with or without Honours, in conformity with such regulations. And any such student who has passed the examination hitherto required for admission to a Curriculum of three sessions shall, if he desire to come under the regulations of this Ordinance, be exempted from the Preliminary Examination herein required.

XXIX. Students may attend any classes without having passed the Preliminary Examination within the meaning of this Ordinance, but such attendance shall not qualify for graduation.

XXX. It shall be competent for the University Court in each University to discontinue the Junior Classes, or Middle Classes, where such exist, in Latin, Greek, and Mathematics, when, in the opinion of the Court, the provision for Secondary Education in schools throughout the country is sufficient to render such classes no longer necessary.

XXXI. Ordinances numbered 12, 14, 18, and 69 of the Commissioners under the Universities (Scotland) Act, 1858, as altered under the provisions of the said Act, are hereby repealed, in so far as they are inconsistent with this Ordinance.

XXXII. This Ordinance shall come into force at the beginning of the first Academical year after the date on which it is approved by Her Majesty in Council.

In witness whereof these presents are sealed with the seal of the Commission.



A. S. KINNEAR,
Chairman.

II. ORDINANCE No. 12. [GENERAL, No. 7—REGULATIONS FOR DEGREES IN SCIENCE.]

At Edinburgh, the 3rd day of February 1892 years.

WHEREAS by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, subsection 5, to regulate the management and ordering of the Universities, and the manner

and conditions in and under which students shall be admitted thereto ; and, in particular (*b*) the course of study and manner of teaching ; the length of the academical session or sessions ; the manner of examination ; the qualifications, appointment, and number of examiners, and the amount and manner of their remuneration ; (*d*) the granting of degrees and the institution of new degrees ; (*e*) the institution of an examination, either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations.

Therefore the Commissioners under the said Act statute and ordain as follows :—

I. Two degrees in Science may be conferred by each of the Universities of Scotland, viz., Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

These degrees may be given in Pure Science and in Applied Science.

DEGREE IN PURE SCIENCE.

II. Every candidate for the degree of Bachelor of Science must pass the Preliminary Examination prescribed by Ordinance, General, No. 6 (Regulations for Degrees in Arts) ; and the conditions with respect thereto imposed by the said Ordinance shall be applicable in all respects to this Ordinance except as follows :—(1) French or German may be substituted for Latin or Greek ; (2) Mathematics shall be passed on the higher standard ; (3) a degree in Arts (not being a degree *honoris causâ tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court after consultation with the Senatus, shall exempt from the Preliminary Examination.

III. (1) Candidates for the degree of Bachelor of Science must in the course of not less than three Academical years, within the meaning of the Ordinance hereinbefore first mentioned, attend at least seven courses of instruction, in subjects prescribed for examination under Sections VIII. and IX. of this Ordinance.

(2) Three of these courses must be in subjects prescribed for the first Science Examination under Section VIII. ; and four must be in subjects prescribed for the Final Science Examination under Section IX.

IV. (1) Four of the seven courses must be taken in the University in which the degree is conferred.

(2) Three may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science :—Provided that the fees for attendance at an approved Institution or under a recognised teacher in the town in which the University is situated shall not be less than the fees exigible for the corresponding courses in the University.

V. All candidates, not matriculated students of a University, availing themselves of the permission to attend lectures at approved Institutions or by recognised teachers in the Town in which the University is

situated, shall at the commencement of each year of such attendance enrol their names in a book to be kept for that purpose in the University, paying a fee of the same amount as the Matriculation Fee paid by students of the University, and having in respect of such payment a right to the use of the Library of the University.

VI. (1) It shall be the duty of the Senatus to determine from time to time the number of meetings of which a full course in any subject shall consist, and to report its determination to the University Court for its approval.

(2) The Senatus, with the approval of the University Court, may sanction half courses of not less than half the number of meetings which constitute a full course in the subject: but two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) It shall be the duty of the Professor and Lecturer annually at the end of each winter session to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(4) It shall be the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science to be hereafter constituted in each University, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next Academical Year. The Faculty of Science shall transmit such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval.

Provided that until the Faculty of Science shall be duly constituted, the syllabus shall be submitted by the Professors and Lecturers directly to the Senatus.

VII. The provisions of the preceding section shall not apply to approved Institutions or recognised teachers outside the Town in which the University is situated; but the University Court shall not grant or continue recognition to any Institutions or teachers unless they shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the Universities of Scotland.

VIII. (1) There shall be a First Science Examination in the three following subjects—viz., (1) Mathematics or Biology (*i.e.*, Zoology and Botany); (2) Natural Philosophy; (3) Chemistry.

(2) The examination in all these subjects shall be the same as the examination in these subjects for the ordinary degree of Master of Arts.

(3) Candidates may present themselves in any one or more of these subjects at any examination held after they have attended a full course in the subject or subjects professed.

IX. (1) There shall be a Final Science Examination on a Higher Standard, in any three or more of the following subjects:—

1. Mathematics.
2. Natural Philosophy.
3. Astronomy.
4. Chemistry.
5. Human Anatomy, including Anthropology.
6. Physiology.
7. Geology, including Mineralogy.
8. Zoology, including Comparative Anatomy.
9. Botany, including Vegetable Physiology.

(2) The standard of this examination shall be as nearly as possible equivalent to that of the examination for the degree of Master of Arts with Honours, where the subjects are different ; and where the subjects are the same, the examination shall be identical.

(3) A subject already taken under the preceding Section for the First Science Examination may be taken also under this Section for the Final Science Examination.

(4) Candidates presenting themselves for this examination must have attended four full courses of higher instruction, including practical or laboratory work, in the subjects professed, subject always to the provisions of Sections VI. and VII. hereof.

(5) The Final Science Examination shall be taken not less than one year after the Candidate has passed the First Science Examination.

X. If a Student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint, and in every case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XI. A Candidate for the degree of Bachelor of Science shall not be deemed to have attended a class as part of the Curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XII. It shall be competent to the Examiners for the degree of Bachelor of Science to report that a Candidate has passed with special distinction in one or more of the subjects professed by him ; and in such a case a Diploma shall be given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

DEGREE IN APPLIED SCIENCE.

XIII. Degrees in Applied Science may be instituted and conferred according to regulations to be laid down in special Ordinances applicable to each University by the Commissioners under the Universities (Scotland) Act, 1889 ; or after the expiry of their powers by the University Court in each University.

XIV. The provisions of Sections II. to VIII. of this Ordinance inclusive, in so far as they relate to the Preliminary and First Science Examinations, shall be applicable in all respects to degrees in Applied Science instituted as aforesaid, except where special provision is made to the contrary in the special Ordinances aforesaid.

DOCTORATE OF SCIENCE.

XV. Graduates of any University who have held the degree of Bachelor of Science for a term of five years, may offer themselves for the degree of Doctor of Science in the same University.

XVI. A Candidate for the degree of Doctor of Science shall present a thesis or a published memoir or work to be approved by the Senatus (on the recommendation of the Faculty of Science when duly constituted): Provided that, if required by the Senatus, the Candidate shall also be bound to pass such an examination as may from time to time be determined

The thesis shall be a record of original research undertaken by the Candidate, and shall be accompanied by a declaration, signed by him, that the work has been done and the thesis composed by himself.

GENERAL.

XVII. A Student who, at the time when this Ordinance shall come into operation, shall have completed a part of his course of study with a view to graduation in Science in any of the Scottish Universities under regulations in force at the time in such University, and shall thereafter complete his course of study and pass the necessary examinations in conformity with such regulations, or with the provisions of this Ordinance, may become a Candidate for the degree of Bachelor of Science.

XVIII. The degrees of Bachelor and Doctor of Science shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum*.

XIX. This Ordinance shall come into force at the beginning of the First Academical Year after the date on which it is approved by Her Majesty in Council.

In witness whereof these presents are sealed with the seal of the Commission.

A. S. KINNEAR,
Chairman.



III. ORDINANCE NO. 13.—[GENERAL, NO. 8—REGULATIONS AS TO EXAMINATIONS.]

At Edinburgh, the 9th day of February 1892 years.

WHEREAS by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, sub-sec. 5, to regulate the management and ordering of the Universities, and the manner and conditions in and under which students shall be admitted thereto; and, in particular (*b*) the manner of examination, the qualifications, appointment, and number of Examiners, and the amount and manner of their remuneration; (*c*) the institution of an examination either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations; and by the said section 14, sub-section 16, to repeal or modify any Ordinance made under the provisions of the Universities (Scotland) Act, 1858.

Therefore the Commissioners under the first-mentioned Act statute and ordain as follows:—

PRELIMINARY EXAMINATIONS.

I. A Board of Examiners shall be constituted, hereinafter called the Joint Board, consisting of representatives of each University to be elected in the manner hereinafter provided.

II. The University Court of each University shall annually appoint as Examiners such number of Professors or Lecturers in the Faculty of Arts in that University, and such additional Examiners as may be deemed necessary. The Examiners in each University shall examine the candidates who present themselves for the Preliminary Examinations in Arts, Science, and Medicine at that University; and shall prepare, set, and mark the examination papers:—Provided that the Examinations shall be under the control and supervision, as hereinafter provided, of the Joint Board.

In the event of a Professor or Lecturer declining to undertake the duty of examining under this section, it shall be in the power of the University Court to appoint another Professor or Lecturer, or an additional Examiner in his place.

III. The Examiners in each University, as soon as they have marked the answers of the candidates, shall transmit through the Senatus to the Joint Board the printed examination papers and the written answers, with copies of the list of candidates, showing the marks assigned to each, and the candidates whom they propose to adjudge successful.

IV. The Joint Board shall consist of four Professors or Lecturers and eight additional Examiners; one Professor or Lecturer and two additional Examiners being appointed in January of each year by the University Court of each University from among the Examiners appointed under Section II. hereof.

Subject to the provisions of Section VII. hereof, the Joint Board shall hold office from the 1st day of February to the 31st day of January in the succeeding year. The members of the Joint Board so appointed shall represent the different subjects of examination, according to the following scheme of rotation:—

UNIVERSITY.	FIRST YEAR.	SECOND YEAR.	THIRD YEAR.	FOURTH YEAR.
ST ANDREWS.	English (Professor). Classics (Additional Examiner). Mathematics and Dynamics (Additional Examiner).	Classics (Professor). Mathematics and Dynamics (Additional Examiner). Modern Languages (Additional Examiner).	Mathematics and Dynamics (Professor). Modern Languages (Additional Examiner). English (Additional Examiner). Classics (Additional Examiner).	Modern Languages (Professor or Lecturer). English (Additional Examiner). Classics (Additional Examiner).
GLASGOW.	English (Additional Examiner). Classics (Additional Examiner). Modern Languages (Professor or Lecturer).	Classics (Additional Examiner). Mathematics and Dynamics (Additional Examiner). English (Professor).	Mathematics and Dynamics (Additional Examiner). Modern Languages (Additional Examiner). Classics (Professor).	Modern Languages (Additional Examiner). English (Additional Examiner). Mathematics and Dynamics (Professor).
ADERDEEN.	English (Additional Examiner). Mathematics and Dynamics (Professor). Modern Languages (Additional Examiner).	Classics (Additional Examiner). Modern Languages (Professor or Lecturer). English (Additional Examiner).	Mathematics and Dynamics (Additional Examiner). English (Professor). Classics (Additional Examiner).	Modern Languages (Additional Examiner). Classics (Professor). Mathematics and Dynamics (Additional Examiner).
EDINBURGH.	Classics (Professor). Mathematics and Dynamics (Additional Examiner). Modern Languages (Additional Examiner).	Mathematics and Dynamics (Professor). Modern Languages (Additional Examiner). English (Additional Examiner).	Modern Languages (Professor or Lecturer). English (Additional Examiner). Classics (Additional Examiner).	English (Professor). Classics (Additional Examiner). Mathematics and Dynamics (Additional Examiner).

V. (1) The Joint Board shall issue from time to time to the Examiners of each University such general directions as to the character of the examination papers to be set, and the method of assigning marks, as may best secure an adequate and uniform standard.

(2) The Joint Board shall also receive, as provided in Section III. hereof, from the Examiners in each University the examination papers and answers of the candidates, and shall, after consideration of such papers and answers as they may deem necessary, accept or correct the results arrived at by the Examiners in the several Universities in accordance with what they shall deem to be an adequate standard.

(3) At the earliest possible date after receiving the examination papers and answers the Joint Board shall report to each Faculty, for whose Preliminary Examination candidates have appeared, the results of the examination of these candidates, and each Faculty shall forthwith publish a list of candidates reported to it as having passed the Examination.

VI. If at an Examination at any University the standard of the questions set for examination shall in their opinion be either too high or too low, the Joint Board shall have power to require the Examiners in that University to submit to them the papers which it is proposed to set at the next Preliminary Examination, and to make such amendments thereon as they may think necessary; but in every such case sufficient notice shall be given to the Senatus of the University on which such demand is made.

VII. Subject to the approval by Her Majesty in Council of Ordinances (General No. 6—Regulations for Degrees in Arts), (General No. 7—Regulations for Degrees in Science), (Glasgow No. 1—Regulations for Degrees in Medicine), (Aberdeen No. 1—Regulations for Degrees in Medicine), and (Edinburgh No. 1—Regulations for Degrees in Medicine), and of this Ordinance, on or before the first day of July 1892:—

Within two weeks thereafter, the University Courts shall complete the election of the Joint Board, and as soon as may be, the Joint Board first elected shall meet at Edinburgh to issue directions as provided in Section V., sub-section (1), hereof, and to fix the date of the first Preliminary Examinations to be held under this Ordinance. The Joint Board first elected shall hold a second meeting, at such time as may be most convenient, for the purposes of Section V., sub-sections (2) and (3). The Joint Board first elected shall thereafter hold office until the 31st day of the second January after its appointment.

Failing the approval by Her Majesty in Council of the Ordinances aforesaid, at the date aforesaid, the Preliminary Examination for the winter Session next ensuing in each University shall be conducted under such regulations as the University Court may think fit.

VIII. In the event of the Ordinances aforesaid receiving the approval of Her Majesty in Council at any date subsequent to the first day of July 1892, the University Courts shall, within six weeks after the Ordinances have received the approval of Her Majesty in Council, complete the

election of the Joint Board ; provided that in computing the said period the months of August and September shall not be counted, or any part thereof.

As soon as may be thereafter, the Joint Board first elected shall meet at Edinburgh to issue directions as provided in Section V., sub-section (1) hereof, and to fix the date of the first Preliminary Examinations to be held under this Ordinance. The Joint Board first elected shall hold a second meeting at such time as may be most convenient for the purposes of Section V., sub-sections (2) and (3) hereof. The Joint Board first elected shall thereafter hold office until the thirty-first day of the second January after its appointment.

In every subsequent year the Joint Board shall meet twice annually in Spring and in Autumn for the purposes of Section V. hereof.

At any such meeting the majority of the Board shall have power to summon a special meeting for the purposes of Section VI. hereof.

IX. The Joint Board shall at each of the said meetings in Spring and Autumn fix the day on which the Preliminary Examination in each University shall begin ; and shall also prescribe the order in which the several subjects shall be taken.

X. The Joint Board shall sit at each University in rotation, and in the following order :—Edinburgh, Glasgow, Aberdeen, St Andrews.

XI. The Principal of the University at which the Joint Board sits shall, when present, act as Chairman for the time, and the Secretary of the University Court of that University shall be Convener of the Board and custodian of all documents ; neither shall be members of the Board, but the Chairman shall have a casting, but not a deliberative vote. The Convener shall, at the termination of his term of office, transmit to his successor in office the documents belonging to the Joint Board. In the absence of the Principal the Joint Board shall elect its own Chairman, who shall be a member of the Board, and shall have a deliberative and also a casting vote.

XII. In each University each candidate, before presenting himself for any Preliminary Examination, shall pay to the General Fund of the University a fee of half a guinea.

XIII. Notwithstanding anything contained in Ordinances (Edinburgh, No. 1—Regulations for Degrees in Medicine) ; (Glasgow No. 1—Regulations for Degrees in Medicine) ; (Aberdeen No. 1—Regulations for Degrees in Medicine), candidates who present themselves for the Preliminary Examination for medical students in any of these Universities at the beginning of the Winter Session of 1892, shall be entitled to all the exemptions in respect of previous examinations by other bodies which have been already published in the Calendars of the several Universities.

EXAMINATIONS FOR GRADUATION IN ARTS.

XIV. The Examiners for graduation in Arts in each University shall be the Professors in that University whose subjects qualify

for graduation in Arts, together with such Lecturers in the University, and such additional Examiners to be appointed by the University Court, as the University Court shall deem necessary. The examinations shall be conducted in writing, and also orally if thought necessary, under regulations framed by the Senatus, subject to the approval of the University Court.

EXAMINATIONS FOR GRADUATION IN SCIENCE.

XV. The Examiners for graduation in Science in each University shall be the Professors in that University, whose subjects qualify for graduation in Science, together with such Lecturers in the University and such additional Examiners to be appointed by the University Court as the University Court shall deem necessary. The examinations shall be conducted in writing, and also orally if thought necessary, under regulations framed by the Senatus, subject to the approval of the University Court.

EXAMINATIONS FOR GRADUATION IN MEDICINE.

XVI. The Examiners for graduation in Medicine in each University shall be the Professors in that University, whose subjects qualify for graduation in Medicine, together with such Lecturers in the University and such additional Examiners to be appointed by the University Court as the University Court shall deem necessary ; provided that the Court shall make such provisions as will ensure that every candidate shall be examined in each subject by at least two Examiners, one of whom shall not be a Professor or Lecturer in the University. The examinations shall be conducted in writing and orally and also clinically, when the nature of the subject admits, under regulations framed by the Senatus, subject to the approval of the University Court.

GENERAL.

XVII. In the case of a candidate at a Preliminary Examination who is permitted to offer himself for examination in any language not included in the Preliminary Examination, each University shall make special arrangements for the examination of its own candidates.

XVIII. In appointing the additional Examiners under this Ordinance, the University Court of each University shall make the appointments for such period as will secure that all the Examiners shall not vacate their office at the same time, provided that no Examiner shall be appointed for a longer period than four years, and that no person who has held the office of Examiner for a period of three or four years shall be eligible for reappointment to the office of Examiner in the same University until he has ceased to hold the office of Examiner in such University for not less than one year.

XIX. No person shall be appointed an additional Examiner under the provisions of this Ordinance who is a Professor, Lecturer, or Uni-

versity Assistant or Demonstrator in any Scottish University. The appointment of any additional Examiner during the currency of his term of office to a Professorship, Lectureship, or of office as University Assistant or Demonstrator, in any Scottish University shall be held to vacate his office of Examiner. In the event of a vacancy occurring through death, resignation, or disqualification, in the office of a Member of the Joint Board, or of an Examiner or additional Examiner, occurring otherwise than by expiration of his term of office, the vacancy shall be filled up, subject to the provisions hereof, by the University Court who appointed the person vacating office, and the person appointed in his room shall be appointed for the remainder of such term only.

XX. Each of the additional Examiners appointed under Sections II., XIV., XV., and XVI. hereof shall receive such remuneration as the University Court in each University shall determine.

Each University shall contribute to the expense of the Joint Board in proportion to the number of candidates who present themselves for examination at that University; and the remuneration paid to the Members of the Board shall be fixed by arrangement between the University Courts of the four Universities.

XXI. Ordinances numbered 5, 8, 14, 15, 16, 19, and 23 of the Commissioners under the Universities (Scotland) Act, 1858, as altered under the provisions of the said Act, so far as they are inconsistent with this Ordinance, are hereby repealed.

In witness whereof these presents are sealed with the seal of the Commission.



A. S. KINNEAR,
Chairman.

IV. PROPOSED ORDINANCE No. 16 [EDINBURGH, No. 1.— REGULATIONS FOR DEGREES IN MEDICINE.]

At Edinburgh, the third day of February eighteen hundred and ninety-two years.

WHEREAS by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by section 14, sub-section 5, to regulate the management and ordering of the Universities, and the manner and conditions in and under which students shall be admitted thereto, and in particular the course of study and manner of teaching, the length of the academical session or sessions, the manner of examination, the qualifications, appointment, and number of examiners, and the amount and manner of their remuneration, the granting of degrees,

and the institution of new degrees; the institution of an examination either on entering the University, or as a preliminary condition of entering on the course of study for a degree in any Faculty, or of both such examinations; and by the said section 14, sub-section 16, to repeal or modify any Ordinance made under the provisions of the Universities (Scotland) Act, 1858:—

Therefore the Commissioners under the first mentioned Act statute and ordain with regard to the University of Edinburgh as follows:—

GRADUATION IN MEDICINE AND SURGERY.

I. Four Degrees in Medicine and Surgery shall be conferred by the University of Edinburgh, viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The Degree of Bachelor of Surgery shall not be conferred on any person who does not at the same time obtain the Degree of Bachelor of Medicine, and the Degree of Bachelor of Medicine shall not be conferred on any person who does not at the same time obtain the Degree of Bachelor of Surgery.

II. Subject to Regulations to be made from time to time by the University Court, the University may also confer Diplomas in Special Branches of Medical and Surgical Practice on Graduates of the University in Medicine and Surgery.

III. Before commencing his medical studies, each student shall pass a Preliminary Examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German: Provided always that, in the case of a candidate whose native language is not English, an examination in the native language of the candidate may be substituted for one in either French or German, and an examination in any other classical language for one in Latin or Greek.

IV. The extent and standard of the Preliminary Examination shall be determined by the Joint Board of Examiners constituted under Ordinance, General, No. 8 [Regulations as to Examinations], in accordance with the terms of that Ordinance.

V. The Preliminary Examination shall be conducted in accordance with the provisions of Ordinance, General, No. 8 [Regulations as to Examinations];—and, subject to the provisions of the immediately succeeding section hereof, the entire examination shall be passed at one and the same time, except in the case of students who, prior to the date at which this Ordinance shall come into operation, have passed a portion of the Preliminary Examination of the University, or of a Preliminary Examination recognised by the University.

VI. A Degree in Arts, or in Science (not being a Degree *honoris causa tantum*), in any of the Universities of the United Kingdom, or in any Colonial or Foreign University specially recognised for the purpose by the University Court, shall exempt from the Preliminary Examination; and the Joint Board of Examiners appointed under the

provisions of Ordinance, General, No. 8 [Regulations as to Examinations], shall have power to determine what examinations, other than those for the degrees hereinbefore mentioned, shall be accepted either in whole or in part in place of the Preliminary Examination.

PROFESSIONAL EDUCATION.

VII. Candidates shall be admitted to the Degree of Bachelor of Medicine and Bachelor of Surgery only after they have fulfilled the following conditions :—

1. The candidate must have been engaged in Medical study for at least five years.
2. In each of the first four years the candidate must have attended at least two courses of instruction, in one or more of the subjects of study specified in sub-section 4 hereof—each course extending over a session of not less than five months, either continuous or divided into two terms ; or, alternatively, one such course, along with two courses, each extending over a session of not less than two and a half months.
3. During the fifth or final year the candidate shall be engaged in Clinical study for at least nine months at the Royal Infirmary, Edinburgh, or at one or more of such Public Hospitals or Dispensaries, British or Foreign, as may be recognised for the purpose by the University Court.
4. The Candidate must, during his Curriculum, have attended a course or courses of instruction in each of the following subjects of study, including such Examinations as may be prescribed in the various Classes, viz. :—

1. ANATOMY, ...	{ During a Course of not less than Five Months.
2. PRACTICAL ANATOMY, ...	{ During two Courses of not less than Five Months each.
3. CHEMISTRY, ...	{
4. MATERIA MEDICA and THERAPEUTICS, ...	
5. PHYSIOLOGY or INSTITUTES OF MEDICINE, ...	
6. PRACTICE OF MEDICINE, ...	
7. SURGERY, ...	
8. MIDWIFERY, and the DISEASES peculiar to WOMEN and INFANTS. Two Courses of Midwifery, of Three Months each, provided different departments of Obstetric Medi- cine be taught in each of the Courses, shall be reckoned equivalent to a Course of not less than Five Months, ...	{ During Courses of not less than Five Months.
9. PATHOLOGY, ...	

10. PRACTICAL CHEMISTRY, ...	} During Courses of not less than Two and a half Months.
11. PHYSICS (including the DYNAMICS OF SOLIDS, LIQUIDS, and GASES, and the RUDIMENTS OF SOUND, HEAT, LIGHT, and ELECTRICITY), ...	
12. ELEMENTARY BOTANY, ...	
13. ELEMENTARY ZOOLOGY, ...	
14. PRACTICAL PHYSIOLOGY, ...	
15. PRACTICAL PATHOLOGY, ...	
16. MEDICAL JURISPRUDENCE and PUBLIC HEALTH, ...	

Provided always in so far as regards the University of Edinburgh that—

(a) It shall be the duty of the Senatus to determine from time to time the number of meetings of which such Courses shall consist, and in what cases two half Courses shall be deemed equivalent to a full Course; and to report the determination to the University Court for its approval.

(b) It shall be the duty of the Professors and Lecturers to submit to the Senatus annually at the end of the Winter Session a scheme specifying what proportion of the Courses shall be devoted to Lectures, Practical Demonstrations, Examinations, and Tutorial Work respectively. The Senatus shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(c) The University Court shall not grant or continue recognition to any institutions or teachers unless it shall be satisfied that their Courses of Instruction are equivalent to the Courses sanctioned in the Universities of Scotland.

5. The Candidate must have attended for at least three years the Medical and Surgical Practice either of the Royal Infirmary, Edinburgh, or of a General Hospital elsewhere, which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons, and is recognised for the purpose by the University Court.
6. The Candidate must have attended Clinical Surgery during a course or courses extending over not less than nine months. These courses may be conducted by the Professor of Clinical Surgery, or by Professors or Lecturers appointed for the purpose by the University Court, or by the Ordinary Surgeons of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with Clinical Lectures.
7. The Candidate must have attended Clinical Medicine during a course or courses extending over not less than nine months. These courses may be conducted by Professors of the University, or by Lecturers appointed for the purpose by the University

- Court, or by the Ordinary Physicians of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with Clinical Lectures.
8. The Candidate must have attended a course of instruction in Mental Diseases of such duration, and so apportioned between lectures, demonstrations, and clinical instruction, as the Senatus, with the approval of the University Court, may from time to time determine.
 9. The Candidate must have attended a course of twenty-five meetings on Practical Pharmacy in a University or recognised School of Medicine, or have dispensed drugs for a period of three months in an Hospital or Dispensary, or in an establishment recognised by the Pharmaceutical Society.
 10. The Candidate must have attended, for at least six months, by apprenticeship or otherwise, the out-practice of an Hospital, or the practice of a Dispensary, or of a Physician or Surgeon, or of a Member of the London or Dublin Society of Apothecaries. He must have acted as Clerk in the Medical and Dresser in the Surgical Wards of a Public Hospital; and must also have availed himself, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying, at an Hospital or Dispensary, *post-mortem* Examinations, Fevers, Diseases of Children, Ophthalmology, or such other special departments as may from time to time be determined.
 11. The Candidate must have attended, under the superintendence of a registered Medical Practitioner, twelve cases of labour, or such additional number as the Senatus, with the sanction of the University Court, may from time to time determine; or have attended for three months the practice of a Lying-in Hospital, or of the Maternity Department of a General Hospital or other Public Charitable Institution, and have conducted personally six, or such an additional number of cases of labour as the Senatus, with the approval of the University Court, may from time to time determine.
 12. The candidate must have been properly instructed in Vaccination at a Public Vaccination Station, by a Public Vaccinator, authorised by the proper Government Authority to grant Certificates of Proficiency in Vaccination.
 13. No candidate for a degree shall be deemed to have attended a class as part of the Curriculum necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

VIII. With respect to the Places and Institutions at which the studies of the candidate may be prosecuted, the following Regulations shall have effect :—

1. Two of the five years of medical study must be spent in the University of Edinburgh, each year of study including always the attendances specified in section VII., sub-section 2.
2. The remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court, each year of study during the first four years including always the attendances specified in section VII., sub-section 2.
3. Of the subjects of study specified in section VII., sub-section 4, not less than eight must be taken in the University of Edinburgh, or (subject always to the provisions as to attendance contained in the immediately preceding sub-sections) in some other University of the United Kingdom, or in some Foreign or Colonial University entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court, or in a College incorporated with, or affiliated to a University, entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court : Provided always that where in any of said subjects of study two or more courses are required, the taking of one of those courses shall constitute a taking of the subject for the purpose of this sub-section.
4. The remainder of such subjects of study may (subject always as aforesaid) be taken in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court.
5. All Candidates, not Matriculated Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.
6. The Fee for attendance, for purposes of graduation, on the courses of instruction of recognised Extra-Academical Teachers in Edinburgh, shall be not less than the amount exigible for the corresponding courses in the University.
7. The University Court shall not recognise as qualifying for examination in any of the subjects specified in section VII., sub-section 4, the class of any teacher who is at the time a teacher of more than one of the said subjects, except in those cases where Professors in the University are at liberty to teach the two subjects : Provided always that a Professor or other Teacher in any endowed public College or Institution, who by the terms of his appointment is required to teach more than one subject of

Medical Study therein, may be recognised under sub-section 2 of this section as a Teacher of any one of the subjects which he teaches.

8. A Teacher, attendance on whose course of instruction shall, before the date of the approval of this Ordinance by Her Majesty in Council, have been recognised for the purposes of graduation in the University, shall not require to obtain a new recognition from the University Court; and attendance on the course of instruction of every such Teacher may continue to be recognised as heretofore.
9. It shall be in the power of the University Court, if it shall see cause, at any time to withdraw or suspend any recognition which it may have granted.

IX. In the University of Edinburgh it shall be the duty of the Professors of the subjects specified in section VII., sub-section 4 hereof (except Practical Anatomy and such other subjects as the Senatus, with the approval of the University Court, may from time to time determine), so to conduct the courses that Students may receive instruction sufficient for graduation in any one of the said subjects by attendance on one course of five or six months, or of two and a half or three months as the case may be.

X. If any Candidate shall, before presenting himself for his Preliminary Examination, have attended in any University of the United Kingdom, or in any University or Institution specially approved, or under any Teacher specially recognised for the purpose by the University Court, a course or courses of instruction in Physics, Chemistry, Botany, or Zoology, equivalent in the judgment of the Senatus to the qualifying course in the same subject in the University of Edinburgh, such attendance shall (notwithstanding anything hereinbefore ordained) be held as entitling him to be examined in these subjects; and if the Candidate shall have attended such course or courses in each of the said subjects, he shall be held to have completed his first year of Medical Study: Provided always that the evidence of such attendance at such equivalent course or courses shall be presented to the Senatus at the time when the Candidate presents himself for his Preliminary Examination; and the Senatus shall, if satisfied, grant a certificate to that effect.

PROFESSIONAL EXAMINATIONS FOR THE DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY.

XI. Each candidate shall be examined, both in writing and orally, and also clinically where the nature of the subject admits, in the following divisions, viz. :—*First*, in Botany, Zoology, Physics, and Chemistry; *Second*, in Anatomy, Physiology and Materia Medica and Therapeutics; *Third*, in Pathology, and Medical Jurisprudence and Public Health; *Fourth*, in Surgery and Clinical Surgery, Practice of Medicine and Clinical Medicine, and Midwifery.

In subjects which admit of practical instruction, the examination shall be such as to test the practical acquirements of the candidate.

Provided always that if a candidate have obtained in a University of the United Kingdom, or other University specially recognised for the purpose by the University Court, a Degree in Science or in Arts, granted in either case after a course of study and an examination in Botany, Zoology, Physics, and Chemistry, he shall be held to have passed his examinations in the said subjects.

XII. Candidates who profess themselves ready to submit to an examination in the subjects comprised in the first division, viz., Botany, Zoology, Physics, and Chemistry, may be admitted to examination in all or any two of these subjects at any examination held after they have attended a full course in each of the subjects professed.

XIII. Candidates who have passed their examinations in the subjects comprised in the first division may be admitted to examination in the second division at the end of the third winter session.

Provided that candidates who so desire may postpone their examination in *Materia Medica* and *Therapeutics* until the close of the summer session following.

XIV. Candidates who have passed their examinations in the subjects comprised in the first and second divisions may be admitted to examination in the third division at the end of the fourth winter session.

Provided that candidates who so desire may postpone their examination in *Medical Jurisprudence* and *Public Health* until the close of the summer session following.

XV. Candidates who have passed their examinations in the subjects comprised in the first, second, and third divisions may be admitted to examination in the fourth or final division, when they have completed the fifth year of study.

XVI. If any candidate at these examinations be found unqualified in one or more subjects, he shall not again be admitted to examination unless he has pursued his medical studies for such time, and subject to such conditions, as the Faculty of Medicine may prescribe.

XVII. If any candidate at these examinations be found to have passed in one or more subjects with sufficient merit, he shall not be liable to re-examination in such subject or subjects, although he may have been found unqualified in a subject or subjects comprised in the same division as hereinbefore specified.

XVIII. Every candidate must deliver, on or before such day as the Senatus may from time to time determine, to the Dean of the Faculty of Medicine, a declaration, in his own handwriting, that he has completed his twenty-first year, or that he will have completed it on or before the day of graduation, and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

XIX. After the candidate has satisfied the Examiners, the Dean of the Faculty of Medicine shall lay the proceedings before the Senatus, by whose authority the candidate shall be admitted, on such day as the

Senatus may from time to time appoint, to the Degrees of Bachelor of Medicine and Bachelor of Surgery, on payment of the required fees.

XX. Candidates for graduation shall produce evidence of their having conformed to the Regulations which were in force at the time they commenced their Medical Studies, except in so far as is provided in section XXV. hereof.

PROFESSIONAL EXAMINATION FOR THE DEGREE OF
DOCTOR OF MEDICINE.

- XXI. 1. Subject to the conditions hereinafter specified, the Degree of Doctor of Medicine shall be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Bachelor of Surgery of the University of Edinburgh, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in Practice other than Practice restricted to Surgery.
2. Each candidate for the Degree of Doctor of Medicine shall be required to pass an examination in Clinical Medicine and in such of its special departments as the Senatus, with the approval of the University Court, by Regulations framed from time to time, shall determine; and he may present himself for examination in Clinical Medicine at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.
3. Each candidate for the Degree of Doctor of Medicine shall submit for the approval of the Faculty of Medicine a Thesis, on any branch of knowledge comprised in the second, third, or fourth examinations for the Degrees of Bachelor of Medicine and Bachelor of Surgery, which he may have made a subject of study after having received those Degrees, excepting subjects which are exclusively Surgical; and the Thesis, accompanied by a declaration signed by the candidate, that the work has been done and the Thesis composed by himself, shall be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.
4. A Bachelor of Medicine and Bachelor of Surgery, who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to the examination in Clinical Medicine

at any period of examination after he has received such Degrees ; but the Degree of Doctor of Medicine shall not be conferred on him unless he shall produce a certificate that, subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, he has been engaged for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively surgical, and unless his Thesis, in the judgment of the Faculty of Medicine, is of exceptional merit.

PROFESSIONAL EXAMINATION FOR DEGREE OF
MASTER OF SURGERY.

- XXII. 1. Subject to the conditions hereinafter specified the Degree of Master of Surgery shall be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Bachelor of Surgery of the University of Edinburgh, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to his having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in practice other than practice restricted to Medicine.
2. Each candidate for the Degree of Master of Surgery shall be required to pass an examination in the following subjects:—Surgical Anatomy, Operations upon the dead body, and Clinical Surgery, and in such of the special departments of Clinical Surgery as the Senatus, with the approval of the University Court, by Regulations framed from time to time, may determine ; and he may present himself for examination in these subjects at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.
3. Each candidate for the Degree of Master of Surgery shall submit, for the approval of the Faculty of Medicine, a Thesis on any branch of knowledge comprised in the second, third, or fourth Examinations for the Degrees of Bachelor of Medicine and Bachelor of Surgery, which he may have made a subject of study after having received those Degrees, excepting subjects that are exclusively medical ; and the Thesis, accompanied by a declaration signed by the candidate that the work has been done and the Thesis composed by himself, shall be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.

4. A Bachelor of Medicine and Bachelor of Surgery who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such Degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to examination in the subjects specified in sub-section 2 of this section at any period of examination after he has received such Degrees ; but the Degree of Master of Surgery shall not be conferred on him unless he shall produce a certificate that, subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, he has been engaged for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively medical, and unless his Thesis in the judgment of the Faculty of Medicine is of exceptional merit.

FEES.

XXIII. The fee to be paid for the Degrees of Bachelor of Medicine and Bachelor of Surgery shall be twenty-two guineas, and the proportion of this sum to be paid by a candidate at each division of the examination shall be regulated from time to time by the University Court. The fee to be paid for the Degree of Doctor of Medicine shall be ten guineas, exclusive of any stamp duty which for the time may be exigible. The fee to be paid for the Degree of Master of Surgery shall be ten guineas.

EXAMINERS.

XXIV. The Examiners for graduation in Medicine in the University of Edinburgh shall be the Professors in that University, together with such Lecturers in the University and such additional Examiners, to be appointed by the University Court, as the University Court shall deem necessary. Provided that the Court shall make such provisions as will ensure that every Candidate shall be examined in each subject by at least two Examiners, of whom one shall not be a Professor or Lecturer in the University. The examinations shall be conducted under regulations framed by the Senatus, subject to the approval of the University Court.

DATE OF COMING INTO EFFECT.

XXV. Every student who began his Medical Studies before the date when this Ordinance shall come into operation shall be entitled to graduate under the system in force before or after that date, according as he shall comply with the Regulations in force in the University before or after that date.

XXVI. The provisions of this Ordinance shall come into operation at the beginning of the Winter or Summer Session next after the approval thereof by Her Majesty in Council.

*In witness whereof these presents are sealed with the seal of
the Commission.*

A. S. KINNEAR,
Chairman.



V. ORDINANCE No. 18. [GENERAL No. 9,—REGULATIONS FOR THE GRADUATION OF WOMEN AND FOR THEIR INSTRUCTION IN THE UNIVERSITIES].

At Edinburgh, the twenty-second day of February, Eighteen hundred and ninety-two years.

WHEREAS by the Universities (Scotland) Act, 1889, the Commissioners under the said Act are empowered by Section 14, subsection 6, to enable each University to admit women to graduation in one or more Faculties, and provide for their instruction :

Therefore the Commissioners under the said Act statute and ordain as follows :—

I. It shall be in the power of the University Court of each University to admit women to graduation in such Faculty or Faculties as the said Court may think fit.

II. It shall be competent to the University Court, after consultation with the Senatus, to make provision within the University for the instruction of women in any of the subjects taught within the University, either by admitting them to the ordinary classes, or by instituting separate classes for their instruction. Such classes shall be conducted by the Professors or Lecturers in the several subjects, or by Lecturers specially appointed for the purpose by the University Court, provided always that the Court shall not institute classes where men and women shall be taught together except after consultation with the Senatus, and provided also that no Professor whose commission is dated before the approval of this Ordinance by Her Majesty in Council shall be required, without his consent, to conduct classes to which women are admitted.

III. The conditions for graduation within any Faculty in which women are admitted to graduation, shall be the same for women as for men, subject to the following modifications, which shall have effect until within each Faculty provision is made for the instruction of women in all subjects qualifying for graduation, in which provision is made for the instruction of men :—

(1) Section XXV. of Ordinance General No. 6 (Regulations for Degrees in Arts) shall not be applicable to the graduation of women in Arts; Section IV. of Ordinance General No. 7 (Regulations for Degrees in Science) shall not be applicable to the graduation of women in Science; and Section VIII. of Ordinances Glasgow No. 1 (Regulations for Degrees in Medicine), Aberdeen No. 1 (Regulations for Degrees in Medicine), and Edinburgh No. 1 (Regulations for Degrees in Medicine), shall not be applicable to the graduation of women in Medicine.

(2) So long as within the Faculty of Arts in any University provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any Scottish University, or from any teacher or in any Institution, within the University town, recognised for the purposes of this Ordinance by the University Court: Provided always that every candidate for graduation shall produce evidence of having satisfied the conditions laid down in Ordinance General No. 6 (Regulations for Degrees in Arts) with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University in which she takes her degree.

(3) So long as within the Faculty of Science in any University provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science: Provided always that every candidate for graduation shall produce evidence of having satisfied the conditions laid down in Ordinance General No. 7 (Regulations for Degrees in Science) with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University in which she takes her degree.

(4) So long as within the Faculty of Medicine in any University provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical Schools or under such teachers as may be recognised for the purpose by the University Court: Provided always that every candidate for graduation shall produce evidence of having satisfied the conditions laid down in Ordinances Glasgow No. 1 (Regulations for Degrees in Medicine), Aberdeen No. 1 (Regulations for Degrees in Medicine), and Edinburgh No. 1 (Regulations for Degrees in Medi-

cine) with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University in which she takes her degree.

IV. So soon as within any of the said Faculties in any University provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men, the conditions for the graduation of women within such Faculty shall be the same as the conditions for the graduation of men.

V. In the case of women who have begun their studies before the date when this Ordinance shall come into operation, it shall be competent to the University Court of any University—

(1) To admit to graduation in Arts, without further examination, women who are registered in the books of the University as having regularly attended classes conducted by the Professors of the University or by their class assistants in the seven subjects hitherto required for the Ordinary Degree of Master of Arts, viz., Latin, Greek, Mathematics, Natural Philosophy, Logic and Metaphysics, Moral Philosophy, and English Literature, and as having, after examination by the University Examiners for the said Degree in all these subjects, obtained the Pass Certificates in Arts of the University.

(2) To admit to graduation in Arts women who are registered in the books of the University as having regularly attended any three or more of the classes aforesaid, and as having obtained the corresponding Certificates aforesaid, provided that they shall have given the required attendance at classes, and passed the required examinations in the remainder of the seven subjects specified in the subsection immediately preceding.

(3) To admit to graduation in Medicine women who may complete their medical studies in accordance either with the regulations for graduation hitherto in force, or with the regulations prescribed by this Ordinance; declaring that as regards their studies prior to the date at which this Ordinance comes into operation, such women may have obtained their instruction in any classes which the University Court may accept for the purpose, and providing that before beginning their medical studies they shall have passed a Preliminary Examination which the University Court shall consider to have been adequate.

VI. (1) Women who may attend classes in any University must matriculate in that University, paying a fee of the same amount as that exigible for other students. (2) Women, who are candidates for graduation but not matriculated students, and who may attend classes within a University town, under the provisions of Section III. hereof, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by students of the University.

VII. It shall be the duty of any University Court which may exercise the power conferred by this Ordinance, to make regulations for the use

by women of such libraries and museums as are open to matriculated students of the University.

VIII. Nothing herein contained shall prejudice the provisions of any future Ordinance by which any College may be affiliated to any University under the powers contained in Section 15 of the Universities (Scotland) Act, 1889.

IX. This Ordinance shall come into force at the beginning of the first academical year after the date on which it is approved by Her Majesty in Council.

In witness whereof these presents are sealed with the seal of the Commission.

A. S. KINNEAR,
Chairman.



GENERAL INDEX.

General Index.

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